

IN THE SUPERIOR COURT OF FULTON COUNTY
STATE OF GEORGIA

DONNA CURLING, et al.,)
)
Plaintiffs,)
) CASE NO.: 2017CV290630
vs.)
)
BRIAN P. KEMP, in his official)
capacity as Secretary of State)
of Georgia, et al.,)
)
Defendants.)

)

Transcript of the Motion Hearing
before the Honorable Kimberly M. Esmond Adams
held on June 7, 2017
at the Justice Center Tower, Courtroom 4-E

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I-N-D-E-X T-O E-X-H-I-B-I-T-S

For the Plaintiffs:

<u>EXHIBIT</u>	<u>TENDERED</u>	<u>ADMITTED</u>
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For the Defendants:

<u>EXHIBIT</u>	<u>TENDERED</u>	<u>ADMITTED</u>
1 Articles of Incorporation	150	151
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1 P-R-O-C-E-E-D-I-N-G-S

2 THE COURT: All right, this is the matter of Curling,
3 et al. v. Brian Kemp, et al. The matter is before the
4 Court for the Court's consideration of an emergency
5 petition for declaratory and injunctive relief and writ of
6 mandamus.

7 Let me start by indicating to counsel that there were
8 a number of belatedly filed briefs. I consider them
9 belated to the extent the Court did not have an opportunity
10 to review them. I think the State may have filed something
11 as late as -- very close to 5:00. There was a subsequent
12 pleading filed thereafter. Some of those documents I have
13 had an opportunity to glean this morning. But,
14 unfortunately, those filings, obviously, don't give the
15 Court an opportunity to review the information contained in
16 them for purposes of being completely prepared.

17 And so I would like to move forward. I will start
18 with the motions to dismiss that have been filed.

19 Also I believe that there is counsel from out of
20 state. I have not received any paperwork regarding
21 admission pro hac vice. Is there anything I need to take
22 up in that regard?

23 MR. KRUGMAN: Yes, your Honor. Edward Krugman. We
24 submitted some time ago the papers for Mr. McGuire, who is
25 lead counsel in this from out of state, for admission pro

1 hac vice.

2 THE COURT: What is "some time ago"? Because you know
3 it takes a bit of time to be processed.

4 MR. KRUGMAN: We filed them almost immediately when
5 the lawsuit was filed.

6 THE COURT: Obviously, that wouldn't give enough time
7 unless you notified the State Bar that you needed expedited
8 consideration.

9 MR. KRUGMAN: We had everything that we needed for
10 submission to your Honor, to the Court, and --

11 THE COURT: Well, it doesn't come to me, Mr. Krugman.
12 Those petitions and requests for admission have to be
13 vetted by the State Bar and then it comes to the Court.
14 And, generally, it is not the case that that can be done in
15 a matter of days.

16 And so I have been looking for information from the
17 State Bar of Georgia. I have not received anything, any
18 writing advising me that the petition has been considered
19 and granted.

20 So I think that we need to take this up as a
21 preliminary matter.

22 MR. KRUGMAN: Yeah, we would orally request --

23 THE COURT: Not "yeah", Mr. Krugman.

24 MR. KRUGMAN: Excuse me?

25 THE COURT: Not "yeah". This is court.

1 MR. KRUGMAN: Your Honor, I don't understand.

2 THE COURT: Go ahead.

3 MR. KRUGMAN: Go ahead with respect to moving for his
4 admission pro hac?

5 THE COURT: If that is what you would like to do.

6 MR. KRUGMAN: Yeah, that is what we'd like to do.

7 THE COURT: And what I'm saying to you, Mr. Krugman,
8 is that I would appreciate if you refrain from the common
9 language, the "yeahs" and "nahs". This is court.

10 MR. KRUGMAN: Yes, your Honor. I apologize. I have
11 had a fever for the last several days.

12 THE COURT: Thank you.

13 MR. KRUGMAN: If we can have Mr. McGuire come up and
14 state, basically, his qualifications, where he's a member
15 of the State Bar. And if we can get a copy of the pro hac
16 papers that were filed for admission. He was also allowed,
17 at the earlier hearing, allowed to present the argument.

18 THE COURT: All right.

19 MR. McGUIRE: Good morning, your Honor. My name is
20 Robert McGuire. I am admitted to practice in the state of
21 New York since 2002, state of Colorado since 2006, state of
22 Washington since last year, 2016. I have never been
23 sanctioned, held in contempt, had my pro hac vice
24 application revoked from any jurisdiction. I have also
25 never been subject to a disciplinary complaint.

1 I have been asked to represent the three plaintiffs in
2 this matter and submitted an application for pro hac vice
3 admission. As Mr. Krugman stated, I believe it was
4 May 30th or it might have been the 25th. But we have it in
5 the binder and I can get the motion, your Honor.

6 And I'm -- off the top of my head, I'm not sure what
7 the other items were that I was supposed to mention. But
8 if I can get the motion, I can certainly go through them
9 and speak to each of them.

10 THE COURT: If you would like to do that.

11 MR. McGUIRE: Thank you.

12 [Brief pause.]

13 MR. McGUIRE: I was advised when I was over there,
14 your Honor, that I might have misstated which state I was
15 admitted to recently. I was admitted to New York in August
16 of 2002, Colorado in 2006 in January, and the state of
17 Washington in May of 2016.

18 I have been admitted to the U.S. Supreme Court since
19 2015; to the U.S. Court of Appeals for The Ninth Circuit
20 since 2012; the U.S. Court of Appeals for The Tenth Circuit
21 since 2009; U.S. District Court for The District of
22 Colorado since 2009; U.S. District Court for The Western
23 District of Washington since July of 2016.

24 Presently admitted in the Circuit Court of The
25 Eleventh Judicial Circuit in and for Miami-Dade County,

1 Florida, pro hac vice. And I have been previously admitted
2 to the Superior Court for the state of California and the
3 county of Contra Costa. That was in 2015.

4 As I previously stated, I haven't been denied pro hac
5 vice in the state of Georgia. I have not had it revoked in
6 this state or otherwise been formally disciplined or
7 sanctioned by any court in this state. And I've never had
8 a formal written disciplinary proceeding brought against me
9 by a disciplinary authority in any jurisdiction.

10 I have never been formally held in contempt or
11 otherwise sanctioned by any court in a written order for
12 disobedience to its rules or orders. And I have not, apart
13 from this application, filed an application to appear pro
14 hac vice with this state in the last two years.

15 I am familiar with the Georgia Rules of Professional
16 Conduct. I am familiar with the local court rules and
17 procedures of this court. And I'm being sponsored by a
18 member of this court, and that would be Robert Ashe of
19 Mr. Krugman's firm, Bondurant Mixson & Elmore. And
20 Mr. Ashe's Georgia Bar number is 208077.

21 THE COURT: Thank you. Anything else?

22 MR. MC GUIRE: I'm happy to answer any questions your
23 Honor has.

24 THE COURT: I don't believe I have any at this time.
25 It appears your application was filed on May 26th,

1 according to the index. Thank you.

2 MR. McGUIRE: Thank you.

3 THE COURT: Are there objections to the oral motion
4 and petition for the pro hac admission of attorney McGuire
5 from any of the defendants?

6 MS. CORREIA: None from the State.

7 MR. BRYAN: None from DeKalb County.

8 MR. WHITE: None from Cobb County.

9 MS. BURWELL: Mr. Barron wouldn't object.

10 THE COURT: On behalf of Fulton County?

11 MS. BURWELL: Yes. Mr. Barron is actually the
12 individual who is the defendant but he's a Fulton County
13 elections director.

14 THE COURT: All right. Based on the fact there are no
15 objections and it appears to the Court that all of the
16 required elements have been set forth for the Court's
17 consideration, the Court will grant the oral motion for the
18 admission of Robert McGuire, pro hac, for purposes of this
19 matter.

20 Having dispensed with that, are we ready to proceed?

21 MR. McGUIRE: Plaintiffs are, your Honor.

22 THE COURT: On behalf of the defendants?

23 MR. BRYAN: Defendant DeKalb County is ready, your
24 Honor.

25 MR. WHITE: Cobb County is ready, your Honor.

1 MS. CORREIA: Secretary Kemp is ready, your Honor.

2 MS. BURWELL: Yes, your Honor, ready.

3 THE COURT: I am ready to proceed, and it seems to me
4 that we should deal first with the issue of standing.

5 What I would prefer, in an effort to have this matter
6 presented in an efficient fashion, is that all of the
7 matters that each party wishes to raise be raised at once,
8 and then whatever responses need to be made can be made
9 thereafter.

10 MS. BURWELL: Your Honor, Kaye Burwell on behalf of
11 Mr. Barron. There are some motions to dismiss that I think
12 it would make more sense for the Court to hear initially.

13 THE COURT: Mr. Krugman, any objection?

14 MR. KRUGMAN: Your Honor, we think that the factual
15 bases for the motion to dismiss basically will be tied in
16 to the motion that was set down for hearing today under the
17 Court's rule nisi, which was the motion for a TRO,
18 interlocutory injunction.

19 For example, the standing issue will be addressed
20 directly in our affirmative case. And I think that many of
21 the issues that have been raised by the defendants in this
22 case are more appropriately raised in response once we have
23 completed the presentation of our case affirmatively.

24 THE COURT: Ms. Burwell, I actually agree with
25 Mr. Krugman so we are --

1 MS. BURWELL: I --

2 THE COURT: May I speak, counsel?

3 MS. BURWELL: Yes.

4 THE COURT: So that we're not back and forth, I'm
5 actually going to proceed in the fashion recommended by
6 plaintiffs. I will permit plaintiffs to begin with their
7 presentations, and thereafter counsel will be permitted to
8 make the arguments that you wish to make. Take your seat.

9 I'm ready to proceed. Mr. Krugman?

10 MR. KRUGMAN: Thank you, your Honor. There is also a
11 matter of two witnesses who are being called as expert
12 witnesses. They were asked to leave the courtroom, we
13 understand at your request. But because they are
14 testifying as experts, they would typically be allowed to
15 listen to the testimony of other witnesses.

16 THE COURT: It actually wasn't at my request. I'm not
17 sure who directed them to leave. The deputy probably did,
18 which is generally what happens in trials that are before
19 the Court. So you are correct. I don't have any problem,
20 based on your representation that they will be testifying
21 as experts, for them to be in the courtroom.

22 Let's get started.

23 MR. McGUIRE: Thank you, your Honor, and thank you for
24 making time for us on an expedited basis.

25 This is an important case. As the Court will be

1 aware, there is a lot of discussion in the country right
2 now about the security and safety of our elections. And
3 this particular election that is going on in the Sixth
4 Congressional District of Georgia is one of the most
5 prominent elections that has been held in recent memory.
6 It is already the most expensive election in American
7 history for a congressional seat.

8 And in view of the news breaking every day, including
9 as recently as yesterday, there is serious concern on the
10 part of voters, including voters who are among the
11 plaintiffs and members of the plaintiff organization Rocky
12 Mountain Foundation, who are extremely concerned about the
13 safety and accuracy of the results that are going to be
14 determined in this election.

15 What we intend to show your Honor with our case in
16 chief is that Georgia operates a system of direct-recording
17 electronic voting machines, a voting system called DREs,
18 which while the Secretary of State asserts it has been
19 approved for use as safe and accurate in Georgia, is not,
20 in fact, safe and accurate given what our expert, computer
21 scientist expert witnesses will testify to.

22 They are going to tell the Court about the
23 vulnerabilities of the system. They will tell the Court
24 about how the system is susceptible to attack. And if the
25 system is attacked, DREs, as they are used in Georgia,

1 create the unique problem that they produce election
2 results which are completely unverifiable. So to the
3 extent they produce a result that people wish to challenge,
4 there is simply no way to determine whether the result as
5 recorded is an accurate reflection of the will of the
6 voters.

7 So based on that showing, we are asking the Court to
8 enter a ruling that the use of this voting system in this
9 election -- and we're just talking about this particular
10 election; we're not trying to rule out the use of any
11 particular voting system for all time or for going forward;
12 we're just talking about this particular election -- is
13 impracticable under the circumstances.

14 There is a Georgia statute that we cited which deals
15 with what happens when it is impracticable to use a voting
16 system. And the statute provides a solution, which is a
17 standard thing that all election officials in Georgia
18 should be prepared to do, which is conduct the election by
19 paper ballots.

20 We believe that we meet the interlocutory injunction
21 standard and we will show that. So given that is what we
22 intend to present, we would be prepared to call our first
23 witness, which would be Mr. Ed Felten, if your Honor is
24 ready.

25 THE COURT: I am.

1 MR. McGUIRE: Your Honor, we actually also have a
2 demonstrative exhibit, which is a voting machine. It
3 requires just a few minutes of setup. I wonder if we could
4 set that up as Mr. Felten is getting sworn in. Thank you.

5 DEPUTY BRYANT: Please raise your right hand.

6 EDWARD WILLIAM FELTEN,
7 having been first duly sworn, was examined
8 and testified as follows:

9 DEPUTY BRYANT: Please state and spell your full name
10 for the Court.

11 THE WITNESS: My name is Edward William Felten. The
12 last name is spelled F-e-l-t-e-n.

13 THE COURT: Mr. McGuire, as this gentleman is
14 proceeding with the setup, I think it is probably useful to
15 make a motion for the admission of the evidence that you
16 are seeking to have the Court consider.

17 MR. McGUIRE: Your Honor, we have an exhibit binder
18 which has a number of exhibits that we intend to address
19 with the witnesses. Are you saying I should move for
20 admission of all of them now?

21 THE COURT: No, but to the extent that you wish to use
22 this as evidence, I would like to inquire of the defendants
23 as to whether they have any objection. So there needs to
24 be a proffer made first as to that item.

25 MR. McGUIRE: Certainly. Your Honor, the plaintiffs

1 are asking to set up a voting machine, which is the kind of
2 direct-recording electronic voting machine that is used in
3 Georgia so that the witness, who has expertise in this
4 particular machine, can speak to the machine. It will
5 clarify his testimony for him to be able to actually point
6 to different parts of the machine as he testifies and --

7 THE COURT: As a foundation matter, you might want to
8 ask questions of your witness.

9 MR. McGUIRE: Certainly, your Honor. If I may voir
10 dire the witness?

11 THE COURT: You may.

12 MR. McGUIRE: Mr. Felten, are you familiar with
13 direct-recording electronic voting machines?

14 THE WITNESS: Yes. I have studied them.

15 MR. McGUIRE: And we have a machine here in the
16 courtroom today. Have you had an opportunity to look at
17 that machine?

18 THE WITNESS: Yes.

19 MR. McGUIRE: And is it the same kind of machine that
20 you are familiar with from your other work?

21 THE WITNESS: Yes. This is the same type of machine
22 that my colleagues and I studied back in 2005 and '06.

23 MR. McGUIRE: And are you aware of the kind of
24 direct-recording electronic or DRE voting machines that are
25 used in Georgia?

1 THE WITNESS: Yes, I am.

2 MR. McGUIRE: Is the exhibit that we're seeking
3 admission of the same kind or a different kind?

4 THE WITNESS: Yes, it is the same kind of equipment.

5 MR. McGUIRE: And will it be helpful to be able to
6 refer to that during your testimony?

7 THE WITNESS: Yes.

8 MR. McGUIRE: Your Honor, based on that testimony, I
9 certainly can ask more questions, but I would proffer that
10 foundation as a basis for admission of the demonstrative
11 exhibit.

12 THE COURT: Do any of the defendants object to
13 admission of the voting machine for demonstrative purposes?

14 MR. HEIDT: No objection from the State, your Honor.

15 THE COURT: Thank you.

16 MR. BRYAN: No objection from DeKalb County.

17 MR. WHITE: None from Cobb.

18 MS. BURWELL: No.

19 THE COURT: Thank you. You may proceed.

20 MR. McGUIRE: Thank you, your Honor.

21 THE COURT: Shall the reference be, for purposes of
22 the record, Exhibit Number 1?

23 MR. McGUIRE: Actually, your Honor, not number 1. We
24 ask it be admitted as 29.

25 THE COURT: Exhibit 29 is admitted for demonstrative

1 purposes.

2 MS. CORREIA: Your Honor, I'm sorry, but none of the
3 defendants have been provided a notebook of the plaintiff's
4 exhibits.

5 THE COURT: I don't think that we have gotten there
6 yet. We can take that up as those exhibits are tendered.

7 [Brief pause.]

8 THE COURT: Ready, Mr. McGuire?

9 MR. McGUIRE: Yes, your Honor.

10 DIRECT EXAMINATION

11 BY MR. McGUIRE:

12 Q. Mr. Felten, have you already stated your name?

13 THE COURT: He has stated and spelled it.

14 MR. McGUIRE: Your Honor, may I approach the witness
15 with Exhibit 6, please?

16 THE COURT: Yes.

17 MR. McGUIRE: And I have a copy as well for the Court.
18 May I approach the bench?

19 THE COURT: You can step up and pass it to me. The
20 Court has granted you leave to approach, as you need to,
21 the witness and the Court for purposes of tendering
22 exhibits.

23 MR. McGUIRE: Thank you.

24 BY MR. McGUIRE:

25 Q. Mr. Felten, I have handed you what has been marked

1 Plaintiff's Exhibit 6. Do you recognize that document?

2 A. Yes. This is an affidavit that I signed and there is
3 an appendix which is my CV.

4 Q. I would like to ask you to turn to the appendix,
5 please. So when did you prepare your CV?

6 A. This CV was prepared, I believe, in January and I
7 reviewed it in May.

8 Q. And does it reflect your qualifications to speak to
9 the issues that are at issue in this court today?

10 A. Yes.

11 Q. So I would like to walk through this briefly so the
12 Court understands your background. Mr. Felten, tell us about
13 your education.

14 A. I received a bachelor's degree in physics from the
15 California Institute of Technology and a master's degree and
16 Ph.D. in computer science and engineering from the University of
17 Washington. The last degree was the Ph.D. in 1993.

18 Q. And where are you currently employed?

19 A. I'm on the faculty at Princeton University.

20 Q. Do you have a particular position there or is there a
21 name for your position?

22 A. I'm the Robert E. Kahn professor of computer science
23 and public affairs.

24 Q. What subject do you teach?

25 A. I teach computer science and public policy.

1 Q. What levels of students do you teach?

2 A. At all levels from freshman up through Ph.D. students.

3 Q. And how long have you had a position as a professor at
4 Princeton University?

5 A. I taught there since 1993 with two leaves of a year
6 plus.

7 Q. Okay. What was your most recent leave?

8 A. The most recent leave was from May 2015 until January
9 of this year. I served in the White House as Deputy United
10 States Chief Technology Officer.

11 Q. And in that role what were your responsibilities?

12 A. I provided advice on policy issues related to
13 information technology to the president and his senior advisors.

14 Q. And you were in that position for a year?

15 A. About 20 months.

16 Q. And do you need any particular qualifications to serve
17 in that government position?

18 A. I understand that I was recruited to work there
19 because of my expertise in technology broadly and in policy
20 issues related to technology.

21 Q. And what was your other leave from Princeton
22 University?

23 A. My other leave was 2011 and '12 when I served as chief
24 technologist at the Federal Trade Commission.

25 Q. And in that capacity of chief technologist for the

1 FTC, what were your responsibilities?

2 A. I was an advisor to the chairman of the FTC, the other
3 commissioners, and the staff on issues related to information
4 technology across the agency's mission areas.

5 Q. And have you received any honors or awards during your
6 time as a professor at Princeton?

7 A. Yes. I was elected to the National Academy of
8 Engineering and the American Academy of Arts and Sciences, and I
9 was named as a fellow of the ACM, which is the largest
10 professional society for computer scientists.

11 Q. And tell us a little bit about the kind of work you do
12 as a professor as far as not teaching but the research side of
13 things.

14 A. I have been doing research related to several broad
15 areas of computer science including cybersecurity and privacy
16 since the mid-1990s. And for about the last 15 years I have
17 also worked on a variety of issues related to public policy and
18 information technology. And I have also gone into some specific
19 areas of which electronic voting technology is one.

20 Q. Let's talk about cybersecurity. Tell us what that is.

21 A. Cybersecurity is about how to design and operate
22 computer systems in order to protect the confidentiality,
23 integrity, and availability of the information. Basically how
24 to make sure that systems will operate correctly in the presence
25 of potential adversaries who might try to intrude or prevent

1 correct operation.

2 Q. When you say systems, what is a system?

3 A. System is interpreted fairly broadly. It includes all
4 of the parts of -- all of the different aspects of technology
5 that might be operating together along with whatever procedures
6 and other controls are in place to try to maintain correct
7 operation.

8 Q. And in your research into cybersecurity, do you have
9 occasion to be familiar with what other researches are doing in
10 that area as well?

11 A. Yes. For at least 20 years I have been regularly
12 attending and sometimes speaking at research conferences and
13 other conferences in cybersecurity.

14 Q. Are there areas of cybersecurity that you feel
15 especially versed in or is it generally a broad field?

16 A. It is a broad field, and I have worked across the
17 field but focusing in a few specific areas including consumer
18 technologies, and electronic voting is one of them.

19 Q. And you mentioned electronic voting systems earlier.
20 Tell us about your research interest in that area.

21 A. I have been following the research literature in that
22 area since around 2001 or '02 and started doing active research
23 in 2003 or so. And I have been doing research in that area
24 publishing and speaking on and off since.

25 Q. And is there any particular type of voting system that

1 you focused on or have you looked at all of them?

2 A. My work focused mostly on DRE voting machines such as
3 the one here. That is voting machines that record the voter's
4 vote directly in electronic memory rather than using some kind
5 of record that the voter can directly examine.

6 Q. When you are looking at voting systems from a security
7 perspective, what sorts of things are you looking at in
8 particular?

9 A. You want to understand the design of the system in
10 detail. You want to understand how it is operated in practice,
11 what are the sorts of controls that are happening in practice.
12 And you want to understand what are the threats, what are the --
13 who were the different actors who might try to intrude or
14 disrupt the operation of a system. And you need to think about
15 those things both in the deeply technical way and also in a
16 practical way in the context of likely use.

17 Q. Have you published any of your research?

18 A. Yes. I have published a number of papers and other
19 materials related to research on electronic voting systems.

20 Q. What publications, for example, have you published in?

21 A. So referring to my CV, some papers relevant to
22 electronic voting issues include:

23 Number 24, which is about privacy and electronic bubble
24 forms sometimes used for voting.

25 Number 29, which is security study of an electronic voting

1 system called AVC Advantage, which is used in New Jersey, for
2 example.

3 Number 30 -- number 31, which relates to a system for
4 post-election auditing.

5 Number 34, which relates to methods for post-election
6 auditing.

7 Number 35, which is a security analysis of the Diebold
8 AccuVote-TS voting machine. That is the system that is here in
9 the courtroom.

10 Number 36, that is machine-assisted election auditing.

11 Q. And are these publications reviewed by your academic
12 peers?

13 A. Yes. At least the majority of those are peer
14 reviewed. Looking back on a quick review, it looks like they
15 are all peer reviewed.

16 Q. The ones you --

17 A. The ones I identified earlier, yes.

18 Q. And in doing the research and writing these
19 publications, is there any particular methodology you use that
20 you could summarize or tell us how you conduct a study on a
21 particular issue?

22 A. It varies a bit depending on the topic that is being
23 discussed. But if one is doing a security analysis of a voting
24 system, that involves first understanding as much as you can
25 about how this system works. That means reverse engineering.

1 It means studying the system. It means looking at what evidence
2 might be already available in the literature about the operation
3 of that machine and then double-checking any of that.

4 And then it means thinking analytically using the tools of
5 security analysis to understand the ways in which a would-be
6 adversary might try to compromise that machine and whether the
7 defenses in place against those sorts of potential attacks are
8 adequate.

9 There is also a relationship between security and
10 reliability because many of the means that are used to prevent
11 malicious failures due to malicious action also serve to protect
12 against failures due to error.

13 So a complete analysis would look as well at the liability
14 issues and what are the implications for reliability of any
15 inadequacies of technology or procedure.

16 Q. So are those methodologies you just described
17 generally accepted, to your knowledge, in your field?

18 A. Yes. Those are the methods that security analysts use
19 in looking at any system.

20 Q. And you also mentioned reverse engineering. What is
21 that?

22 A. Reverse engineering is -- well, you can think of it as
23 a fancy term for taking something apart to see how it works. It
24 is the analysis that one does in order to either understand how
25 a system works where you're lacking information in advance or to

1 verify information that you might have.

2 So that might include looking at internals. It might
3 include setting up experiments to measure the performance of the
4 behavior of one aspect of the system. Or it might involve the
5 use of tools that are designed for reverse engineering that are
6 designed to try to help an analyst understand something.

7 Q. So to take something apart, you have to have it. Have
8 you actually had voting machines you have physically dealt with?

9 A. Yes, yes. In my lab we've had at least four different
10 kinds of DRE voting machines.

11 Q. And is the kind of DRE voting machine we're talking
12 about here today one of the kinds you've looked at or taken
13 apart?

14 A. Yes.

15 MR. MCGUIRE: Your Honor, based on Mr. Felten's
16 testimony thus far, I would tender him, respectfully, as a
17 witness in the subjects of cybersecurity generally and
18 voting systems security and reliability.

19 THE COURT: All right. I would like to inquire so
20 that the record is clear. As to defense counsel, is there
21 a particular order that you-all would like to proceed?

22 MR. HEIDT: Secretary Kemp will go first, and then
23 followed by the other counties.

24 THE COURT: All right. Secretary Kemp is first. Then
25 whom?

1 MR. WHITE: Your Honor, if it's okay, I guess we'll go
2 in order of the complaint, which is Secretary Kemp; and
3 then Barron, which is Fulton County; Daniels for DeKalb;
4 and then Eveler for Cobb.

5 THE COURT: Fair enough. Any voir dire or objection
6 on behalf of the State?

7 MR. HEIDT: No objection.

8 THE COURT: For Fulton County?

9 MS. BURWELL: No, your Honor.

10 THE COURT: DeKalb?

11 MR. BRYAN: No, your Honor.

12 THE COURT: Cobb?

13 MR. WHITE: No, your Honor.

14 THE COURT: You may continue, Mr. McGuire.

15 MR. McGUIRE: Thank you, your Honor.

16 THE COURT: And for the record, Mr. McGuire, you did
17 not tender Plaintiff's 6. You reviewed it with Mr. Felten.
18 I didn't know if it was your intention to tender it or not.

19 MR. McGUIRE: I was about to. Would your Honor prefer
20 I do that before I hand it to opposing counsel or --

21 THE COURT: It doesn't matter to me how you do it but
22 you didn't do it with Exhibit 6. I just wanted to make
23 sure there was a record.

24 MR. McGUIRE: Yes. I guess at this time what we would
25 like to do, we would like to tender Exhibits 1 through 8,

1 which are already before the Court as attachments 1 through
2 4, which are attachments to our complaint, and 5 through 8,
3 which are attachments to the motion. We'll refer to them
4 but I would like to tender them if possible now.

5 THE COURT: Counsel, do you-all have any objection
6 starting with the State?

7 MR. HEIDT: Yes, your Honor. We object to Exhibits 1
8 through 4 because they are hearsay.

9 THE COURT: All right. So let's take them in turn.
10 You still have not tendered 6.

11 MR. McGUIRE: 6 or 26?

12 THE COURT: 6.

13 MR. McGUIRE: Your Honor, I would like to move the
14 admission of Exhibit 6, which is Mr. Felten's affidavit.

15 THE COURT: Any objection on behalf of the State?

16 MR. HEIDT: No, your Honor.

17 THE COURT: Fulton?

18 MS. BURWELL: No, your Honor.

19 THE COURT: DeKalb?

20 MR. BRYAN: No, your Honor.

21 THE COURT: Cobb?

22 MR. WHITE: No, your Honor.

23 THE COURT: And, counsel, I hope you will forgive me
24 for referring to you in that manner but I think it is
25 clearer for the record.

1 Based on there being no objection, Plaintiff's 6 is
2 admitted.

3 MR. MC GUIRE: Thank you, your Honor.

4 Your Honor, may I approach the witness?

5 THE COURT: Again, you have leave to do that.

6 BY MR. MC GUIRE:

7 Q. Mr. Felten, I have handed you what is marked
8 Plaintiff's Exhibit 26. Have you seen this document before?

9 A. I don't think I have seen it in this form, no.

10 Q. Looking at it -- first of all, it is titled Fulton
11 County Election Data Flow. Do you see that?

12 A. I do.

13 Q. Looking at it, can you tell us what is depicted on
14 Exhibit 26?

15 A. So this appears to show how election data is
16 transported from place to place and it's labeled as Fulton
17 County. So it shows different steps in voting machines and the
18 transmission of data in different forms.

19 Q. And you earlier mentioned voting system. When you
20 look at Exhibit 26, does this describe a voting system?

21 A. This is part of a system. If you are talking about
22 the entire system, you would include things that happen
23 pre-election and things that are part of the casting of the
24 votes as well, which are not depicted on this diagram.

25 Q. So it sounds to me like you are saying procedural

1 things are also part of the voting system?

2 A. Yes. For the purposes of thinking about security, you
3 have to include procedures.

4 Q. So tell us, please, how -- if you can, sort of end to
5 end, how does a DRE voting system like the kind used in Georgia
6 work?

7 A. The DRE voting system -- so what we have here in the
8 courtroom is the voting machine that a voter would use to cast
9 their votes. There are steps that happen before the polls are
10 opened that are needed to get this set up.

11 So that includes the preparation of information about
12 ballots and races and so forth for individual precincts. That
13 would be prepared using a back-end election management system
14 typically and then transported to the polling places. The
15 voting machines would be prepared by election workers. They
16 would be transported to the polling place.

17 The election materials would be inserted into the voting
18 machine, on a machine like this. That would typically occur
19 through a memory card that is stuck into the machines
20 externally. There are -- additionally there are aspects of the
21 system that relate to voter registration and the validation of
22 voters at the polling place. And that might typically use an
23 electronic pollbook system, which needs to be prepared and
24 initialized.

25 Once all those pre-election steps have been taken, when a

1 voter arrives at the polling place, they will announce
2 themselves and identification that is required. Their name will
3 be checked against the information in the electronic pollbook to
4 make sure they are on the rolls, haven't already voted, and so
5 on.

6 And assuming that the voter is qualified, they would be
7 given, on this machine, a voter card, which is a smart card, a
8 small card that looks a lot like a credit card only -- it looks
9 like one of the new credit cards with the metal contacts on it
10 only decorated differently.

11 The voter would be given that voter card. They would take
12 that to the voting machine and insert it into the voting
13 machine. At that time, the voting machine would display menus
14 on the screen that the voter could use to express their desire
15 about how they want to vote.

16 At the end of that process, the voter will press a button
17 labeled "Cast Vote" or something like that. The memory card
18 would be ejected and the voter would return it to poll workers.
19 The voter then leaves the polling place.

20 There are some records at that point which one hopes are
21 stored inside the voting machine, and later in the day when the
22 polls are closed, there are procedures for taking the records
23 relating to cast ballots from the voting machines. Typically
24 they would be tabulated or a tabulation of them would be taken
25 in the polling place to know what the totals are.

1 And then information would be transmitted from the polling
2 place to the central office where tabulation would occur. You
3 typically use an election management system. And then after
4 that, results might be distributed to the press and to the
5 public.

6 That is -- it is an involved process but that is a summary.

7 Q. What parts of the process, if you could identify them,
8 involve computers and technology?

9 A. Technology is pervasive through the process. The
10 election management systems, the electronic pollbooks, the
11 electronic voting machines are technological. And the records
12 of votes, of races, and of other things are stored in electronic
13 form in a lot of different cases, inside the memory of devices
14 like the voting machines and the pollbooks and on removable
15 media as well.

16 So it is an inherently technological process.

17 Q. So for a voting system like this, when a voter casts
18 their ballot, where is the vote recorded?

19 A. When the voter casts the ballot on this machine, the
20 vote will be recorded on a removable memory card, which is in
21 the machine, and also in the internal memory of the machine.
22 That is what is supposed to happen.

23 Q. And what other records of the voter's vote would be
24 created that could be considered an official record?

25 A. There could be a log of the fact that a vote was cast.

1 And, of course, then there are records elsewhere in the polling
2 place that that particular voter came, was validated, and voted.
3 But the ballot itself would be stored inside the voting machine.

4 Q. To your knowledge, in a DRE voting system are there
5 any other places besides the machine and its card where the
6 actual content of a voter's electoral choice is recorded?

7 A. When the voter casts their vote, all of the records of
8 the vote are kept inside the machine in electronic memory. That
9 is sort of what defines a DRE, a direct-recording electronic
10 system.

11 Q. So is there any paper involved?

12 A. There is not a paper record made that the voter can
13 see. The overall process involves some use of paper, but the
14 record of the voter's vote as the voter has cast it is not
15 represented directly on paper in any form that the voter can see
16 or verify.

17 Q. So how does the voter's touching the part of the
18 screen get translated into a record of that person's selection
19 on a removable card?

20 A. Inside the machine, there is an operating system that
21 allows the device to operate. This voting machine and other
22 DREs are very much like, say, laptop computers. They have --
23 they are general purpose computers. They use, in many cases,
24 commodity operating systems. This uses a very old version of
25 Microsoft Windows.

1 Then on top of that, there is application software that is
2 produced by the voting machine vendor. In this case, it is a
3 system called Ballot Station, which runs as an application on
4 top of Windows. And that is what the voter is interacting with
5 when they are pushing buttons on the screen. They are
6 interacting with that Ballot Station software.

7 Q. So in your research into cybersecurity and voting
8 systems security and reliability, have you had occasion to look
9 at this particular kind of machine?

10 A. Yes.

11 Q. And have you developed findings based on that
12 research?

13 A. Yes. Those findings are summarized in paper number 35
14 on my CV and some other related materials that we published.

15 Q. Paper number 35 on your CV is the one entitled
16 Security Analysis of the Diebold AccuVote-TS Voting Machine?

17 A. Yes.

18 Q. Was that article one of the ones that was attached to
19 the complaint in this case?

20 A. I don't recall.

21 Q. We're going to get an exhibit for you -- before we
22 move on to the next exhibit, Mr. Felten, looking at Exhibit 26,
23 you obviously described the voting system as having more parts
24 than what are shown here. Is this a fair representation of the
25 part of the process that goes between the precinct and the

1 tabulation?

2 A. Yes. This is -- this is a fair summary of how it
3 could be done in one place. This may not be the only way in
4 which users of this DRE in differing jurisdictions do it.

5 MR. McGUIRE: Your Honor, I move for the admission of
6 Exhibit 26.

7 THE COURT: Is there any objection on behalf of the
8 State --

9 MR. HEIDT: No, your Honor.

10 THE COURT: -- the Secretary of State? Fulton County?

11 MS. BURWELL: No, your Honor.

12 THE COURT: DeKalb?

13 MR. BRYAN: No, your Honor.

14 THE COURT: Cobb?

15 MR. WHITE: No, your Honor.

16 THE COURT: Plaintiff's 26 is admitted.

17 BY MR. McGUIRE:

18 Q. Mr. Felten, I handed you what is marked Exhibit 1. I
19 would like to ask you to take a look at that and let me know
20 when you are ready.

21 [Brief pause.]

22 A. Okay.

23 Q. So Exhibit 1 contains a number of documents. Are you
24 familiar with the documents in Exhibit 1?

25 A. Yes.

1 Q. Can you tell us what -- and I'll represent this was
2 Exhibit 1 to our complaint in this case. Can you tell us what
3 these documents -- what this first document is that has the date
4 of May 10, 2017?

5 A. May 10, 2017. Well, this appears to be a letter to
6 Mr. Brian Kemp --

7 MS. BURWELL: Your Honor, I object to this witness
8 testifying to this particular document. There is no
9 indication that he authored this document --

10 THE COURT: Counsel, the document is not being
11 tendered at this point. I will inquire as to whether there
12 are objections when it is tendered for admission.

13 You may continue.

14 BY MR. McGuire:

15 Q. You were saying what this document is.

16 A. This document appears to be a letter to Mr. Brian Kemp
17 that is signed by a number of people who are listed at the end.

18 Q. Did you have anything to do with the preparation of
19 this document?

20 A. No.

21 Q. Turning to page 7, there is another letter there that
22 has a date of March 15, 2017, at the top. Do you see that?

23 A. I do.

24 Q. Do you recognize that document?

25 A. This appears to be another letter to Mr. Kemp.

1 Q. And did you have anything to do with that document?

2 A. No.

3 Q. Now, I would like to ask you to turn to page 10. This
4 appears to be a publication of some kind. Are you familiar with
5 that document?

6 A. I have seen this paper before.

7 Q. What is it about?

8 A. This is a paper about some design issues with the GEMS
9 tabulation database. GEMS is an election management system that
10 I understand is used in Georgia.

11 Q. Is that part of the voting system that this kind of
12 machine is used with?

13 A. It is part of the voting system, yes.

14 Q. The GEMS database?

15 A. Yes.

16 Q. Do you know what the holdings or the findings of this
17 paper are?

18 THE COURT: Mr. McGuire, I'm at this point concerned
19 about how you are proceeding. If you are attempting to lay
20 a foundation, that is where we need to stay. It is not
21 appropriate for the witness to testify about this item of
22 evidence until it has been tendered.

23 So if you will attempt to lay foundation, offer it for
24 admission so I will have an opportunity to inquire of
25 defense counsel as to whether there is an objection to its

1 admission.

2 MR. McGUIRE: Thank you, your Honor.

3 BY MR. McGUIRE:

4 Q. In your research, do you review other publications by
5 other computer scientists?

6 A. Yes, I do.

7 Q. Is this a publication, Exhibit 1, page 10, one of the
8 ones that you are familiar with?

9 A. I have reviewed this before.

10 Q. Are you aware of what the findings are?

11 THE COURT: Same instruction.

12 MR. McGUIRE: Rather than --

13 THE COURT: Let me say this. He may be able to
14 testify about it in a different way, but you tendered it as
15 part of an overall exhibit. So what I understood you were
16 doing was attempting to lay a foundation before offering
17 this item into evidence for admission so I can give the
18 defendants an opportunity to impose any objection they
19 might wish to make.

20 MR. McGUIRE: Well, what I'd like to do, actually,
21 I'll turn to the next exhibit which I think I will want to
22 admit. If your Honor will allow me to ask about the next
23 one and then I'll tender it.

24 THE COURT: You will tender what?

25 MR. McGUIRE: The next document beginning on page 17

1 of Exhibit 1 is a document I would like to ask him about.

2 I was basically trying to put this in context with these
3 questions. I'm not trying to tender these at this time.

4 THE COURT: Please continue.

5 BY MR. McGUIRE:

6 Q. Mr. Felten, turn to page 17, please. What document is
7 that?

8 A. This is a copy of the paper that I am a co-author of
9 which appears to be number 35 on my CV.

10 Q. And have you had a chance to look to see if that is a
11 complete copy of the paper that you authored?

12 A. Yes, it is.

13 MR. McGUIRE: Your Honor, I would like to tender this
14 article beginning on page 17 of Exhibit 1 as Mr. Felten's
15 article that he referred to on his CV. I guess I tender it
16 as Exhibit 1 although it is part of this document.

17 THE COURT: So if you are not tendering the entire
18 document, you probably need to extract those pages.

19 MR. McGUIRE: I believe we'll have other witnesses
20 testify to other parts of the document. He is not the
21 witness to testify to the first few sections of it because
22 he doesn't have direct personal knowledge. But other
23 witnesses who will be called will be able to attest to
24 those documents.

25 THE COURT: So you are asking me to allow a witness to

1 testify about it so you can link it up later? Because
2 right now it is part of an overall exhibit and there are
3 several pages in this exhibit.

4 MR. McGUIRE: Maybe the easiest thing -- I'll move
5 later, once I've gotten it fully authenticated. What I'll
6 do now is just ask Mr. Felten about his article.

7 BY MR. McGUIRE:

8 Q. Mr. Felten, in the article that you wrote that is
9 titled Security Analysis of the Diebold AccuVote-TS Voting
10 Machine, tell us when you wrote that article.

11 A. The first version of this was written in September of
12 2006, and this version was completed in 2007.

13 Q. And what were the findings that your research
14 uncovered in connection with this article?

15 A. We did an independent security analysis of the Diebold
16 AccuVote-TS. That is the machine that is here in the courtroom.
17 And we found a number of very serious security vulnerabilities
18 in the design of the machine and of the software. And the paper
19 goes into some detail about what were the security
20 vulnerabilities and the implications of those vulnerabilities
21 for the use of these machines in elections, which we concluded
22 were very serious.

23 Q. Can you give us an idea of some of the specific
24 vulnerabilities you uncovered?

25 A. Sure. A good place to refer here is what is on

1 page 18 of the exhibit under Main Findings. That, first of all,
2 malicious software running on a single voting machine can steal
3 votes with little risk of detection.

4 That is that if someone could install malicious software
5 onto the voting machine that they could arrange that the results
6 of an election were reported incorrectly and inconsistent with
7 how the voters actually pushed buttons on the screen. And all
8 the records in the machine that might be cross-checked or all
9 the audit logs and so on that the machine kept could relatively
10 easily be falsified so that the records were self-consistent but
11 not -- the records were consistent in every way except with how
12 the voters voted.

13 Second, that anyone who has physical access to voting
14 machines or to a memory card that will later be inserted can
15 install malicious software on the machine and that can be done
16 in as little as a minute.

17 Third, that these machines were susceptible to voting
18 machine viruses. That is that the malicious software could
19 spread between voting machines and memory cards and potentially
20 to back-end election management systems so that an infection of
21 one card or one machine might spread widely within a
22 jurisdiction through the operation of normal election
23 procedures.

24 And then, finally, that although some of those problems
25 could be eliminated by improving the software on the machine

1 that others cannot. Others are inherent to the way the
2 hardware, the equipment of the machine is designed and,
3 therefore, could not be fixed.

4 Q. Now, you said this was published in 2006?

5 A. We released the first version of this paper on our
6 website in 2006. And then it went through peer review and the
7 peer-reviewed version officially appeared in 2007.

8 Q. So the initial version was 11 years ago; right?

9 A. Close to 12, yes.

10 Q. How have your --

11 A. I'm sorry, 11 is correct.

12 Q. How have your findings held up over time?

13 A. There has not been new research that contradicts the
14 findings that we had, and there have been additional studies of
15 this system since ours that found consistent results.

16 For example, the California Secretary of State in 2007 had
17 what she called a top-to-bottom review of the voting systems
18 used in that state and brought in a team of experts to look at a
19 number of different voting systems including this Diebold DRE
20 system. And the analyst in the California Top-to-Bottom Review
21 came to conclusions that were consistent with ours.

22 They found the machines were susceptible to malicious
23 software that could change votes and falsify records; that
24 installing malicious software was a relatively straightforward
25 process; and that the machines were susceptible to voting

1 machine viruses among other things.

2 And there have been other studies over time that have been
3 consistent with our findings.

4 Q. Now, how does the dates of these studies line up with
5 Georgia's adoption of this system?

6 A. Georgia adopted this system in -- I don't recall
7 exactly but if I remember correctly it was around 2000. As I
8 understand it, the certification that Georgia is currently
9 relying on was done in 2005.

10 Our study was first released in September of 2006 and then
11 the peer-reviewed version in the summer of 2007. And the
12 California Top-to-Bottom Review was released in July of 2007.

13 So our study and the California Top-to-Bottom Review were
14 both after the certification that Georgia is currently relying
15 on, as I understand it.

16 Q. So your studies were more recent than the version of
17 the system that was certified by Georgia?

18 A. One needs to be careful about dates and software
19 versions because they can be a little bit out of alignment.

20 The Georgia certification in 2005 related to version 4.5.2
21 of the software. Our study, which was first released in 2006,
22 related to an earlier version, version 4.3.15.

23 The California Top-to-Bottom Review, which came out in
24 July 2007 -- I'm sorry, July 2007, that was a later version of
25 the software in the 4.6 range.

1 So our study was an earlier version than the one that was
2 certified in Georgia. The California study was of a later
3 version than the one that was certified in Georgia.

4 And so the combination of our study and California's study
5 show that the vulnerabilities that both of those studies found
6 must have been present in between. The only alternative would
7 be that the vendor took the vulnerabilities out and then put
8 them back in, which is not plausible.

9 Q. Again, what was the result of the California study?

10 A. What the California study found was similar in its
11 technical and security findings to our study. But as a result
12 of that, the Secretary of State then conditionally decertified
13 and then eventually recertified the system but after a bunch of
14 changes had been made.

15 THE COURT: Which Secretary of State?

16 THE WITNESS: The Secretary of State of California,
17 excuse me, as a result of the California Top-to-Bottom
18 Review.

19 BY MR. MC GUIRE:

20 Q. Now I would like to ask you about why these
21 vulnerabilities matter.

22 A. Well, the vulnerabilities go right to the core of what
23 the voting machine is supposed to do, which is record the votes
24 accurately and securely.

25 What the vulnerabilities show is that the defenses that are

1 in place against the manipulation of the voting machines are not
2 adequate to ensure that the votes can be adequately -- be
3 accurately counted in a setting where the machines may be
4 accessible to malicious parties, either directly or indirectly.

5 Q. And what kind of skills would a malicious party have
6 to have in order to take advantage of these vulnerabilities?

7 A. In order to install malicious software, it doesn't
8 require any particular technical skill. What would be required
9 to install malicious software on, say, this machine would be
10 to -- it might be useful if I could point to the machine
11 directly.

12 MR. MC GUIRE: Your Honor, may the witness
13 demonstrate --

14 THE COURT: You can do it from there.

15 THE WITNESS: Okay. On the right side of the machine
16 you see a little metal door that is swung half open. That
17 metal door would need to be opened. And behind that metal
18 door there is a slot where memory cards fit in. Memory
19 cards are about the size of a credit card, only a little
20 bit thicker, and there is a little button you press to pop
21 them out.

22 So in order to install malicious software, one would
23 have to open that door by using a key -- and the keys are
24 widely available -- or by picking the lock, which is not
25 difficult to learn how. Then remove the memory card that

1 is in there, put in a new memory card that you presumably
2 would have brought along, and press the red button.

3 THE COURT: Who would have access to those keys?

4 THE WITNESS: Those keys are sold on the Internet.
5 Back in 2006 I bought a gross of them on the Internet, and
6 I bought another one last week.

7 THE COURT: Did you attempt to use any of those on
8 these machines?

9 THE WITNESS: I did on the machines that -- I did on
10 the machine that we had back then. I have not done it on
11 this machine.

12 THE COURT: And on the machine you attempted to use
13 the key that you purchased online, did it work and grant
14 you access?

15 THE WITNESS: Yes. And at that time the vendor
16 Diebold also had published online a photograph of the key.
17 And an independent security researcher used that photograph
18 to file a key himself from a blank, which he sent to us,
19 and we then used it to open the machine. So those keys are
20 widely available.

21 And these locks can also be picked. There was a
22 member of our research team who wasn't -- who sort of was
23 an amateur locksmith, and he could consistently pick the
24 lock in 15 seconds or less. So anyone who has those
25 skills, or has a key because they are maybe in a trusted

1 role, someone would be able to do it.

2 On the keys of the machine that we had, there was an
3 alphanumeric code printed on the key. And if you just
4 googled that alphanumeric code, it would take you to sites
5 that would sell you the key.

6 BY MR. MC GUIRE:

7 Q. Now, is there any evidence that you are aware of
8 since, say, 2006 that an actual voting system like this in
9 operation has been attacked by an adversary in the way you are
10 talking about?

11 A. I don't know of examples of an active attack on one of
12 these, but we have to be a little cautious because the machines
13 gather relatively little evidence that would be useful in the
14 finding of a sophisticated attack.

15 Q. Tell us more about that.

16 A. The records of what happened in the election that are
17 kept in the machine's memory are all accessible to malicious
18 software that might exist on the machine. So although one may
19 sometimes hear about there being two copies and there being an
20 audit log and so on, because all of that is maintained by the
21 software on the voting system, malicious software can falsify
22 those records.

23 It is as if you had a cashier and you wanted to make sure
24 that cashier wasn't pocketing money. And you told the cashier,
25 "Every time you receive money, make a record and put it your

1 left desk drawer. Make another record and put it in your right
2 desk drawer. Make another record, record it in a log-on
3 clipboard on your desktop. And at the end of the day fill out a
4 form saying how much you received that day".

5 At the end of the day, ultimately you are trusting that
6 cashier. And the cashier who wants to receive \$100 and say they
7 received 1 can just fill out the records as if they received 1.

8 It is more or less the same thing here. The voting
9 machine, the software in the voting machine itself creates all
10 the records that ultimately would be cross-checked afterward to
11 look for anything being wrong.

12 The only other hope you would have to discover that
13 something was wrong is if you tried to verify the version of the
14 software in the system. But you would need to have a secure
15 protocol for doing that, which appears not to be the case in
16 Georgia.

17 Q. Just so I am clear. In your analogy there, the
18 cashier is the machine itself?

19 A. The cashier is the machine itself keeping the records
20 of who the voters actually said they wanted to vote for. And
21 all of those records are created by the software in the machine,
22 which is subject to manipulation or replacement, as I described.

23 Q. And I believe that you said -- so essentially are you
24 saying that you are trusting the machine to report if there is a
25 problem?

1 A. More or less. You are asking the machine itself
2 whether it has honestly reported the results.

3 Q. And is that something that someone who is a malicious
4 actor would know?

5 A. Yes, certainly. The software in the machine creates
6 all of those records at the time that the voter has voted. And
7 when we built in our laboratory demonstration software that
8 would steal a simulated election, we programmed it to falsify
9 all of those records.

10 Q. So if someone had come after you and looked at your
11 machine, would they have found any information of the
12 falsification that you programmed in?

13 A. The records that machine produced were all
14 self-consistent. Everything would have looked fine had someone
15 inspected the recorded ballots on the memory card, the recorded
16 ballots on the internal memory, the audit logs produced by the
17 machine. All of those records checked out as fine and
18 consistent with the story that the malicious software in the
19 machine was telling about what had happened.

20 Q. So I want to ask you about some recent events that
21 happened here in Georgia and ask if they have anything to do
22 with your area of research.

23 Are you familiar with any of the publicly reported election
24 irregularities that have come up?

25 A. I have seen some reports of those, yes.

1 Q. What are you aware of?

2 A. I have seen reports about an intrusion at Kennesaw
3 State University's CES -- Center for Election Systems, I think
4 it is -- as well as some reports about pollbooks being stolen
5 and then recovered.

6 Q. So let's take each of those in turn. First of all,
7 what is Kennesaw State's role here?

8 A. As I understand it, Kennesaw State does functions
9 related to the management and testing and certification of
10 machines and preparation of machines for use in elections.

11 Q. Are you aware whether they physically warehouse the
12 machines?

13 A. I believe they do. Certainly, Kennesaw State -- the
14 things that Kennesaw State does are part of the overall election
15 system as we have talked about.

16 Q. When you said there was an intrusion at Kennesaw
17 State, what does that mean?

18 A. I understand there was -- that there was --

19 MS. BURWELL: Your Honor, excuse me, I am going to
20 object at this point. This is clearly hearsay. He
21 wasn't involved --

22 THE COURT: I just need a word or a phrase,
23 Ms. Burwell. I don't need all the commentary. Your
24 objection is sustained.

25 BY MR. McGUIRE:

1 Q. If it were true that someone gained access to Kennesaw
2 State, would that concern you?

3 A. Yes it would.

4 Q. Why?

5 A. It would because, as I described earlier, access to
6 the machines, to the memory cards, or to the back-end systems or
7 other systems that are put in contact with the voting systems
8 constitutes a risk that malicious software would be installed.
9 And so if there is an intrusion into a facility where those
10 activities are done, then that could produce a vehicle by which
11 malicious software or intrusion could reach the voting machines.

12 Q. And you mentioned pollbooks. What is the role of
13 pollbooks in the system?

14 A. Pollbooks, electronic pollbooks are used to verify and
15 check in voters when they arrive at a polling place.

16 Q. If it were true someone other than the person in the
17 official chain of command had possession of the pollbook in this
18 election, would that concern you?

19 A. It would because the pollbooks are what determines who
20 gets to vote, who gets to put their hands on a voting machine as
21 well as whose ballot actually gets counted.

22 Q. So if someone had a pollbook, what could they do?

23 A. A person who had access to the pollbooks could, in
24 principle, manipulate the voter check-in process, and they could
25 enable a person not qualified to vote, who shouldn't be with

1 hands on a voting machine, to have hands on a voting machine.

2 Q. Are there any defenses that KSU or the State can take
3 to avoid those kind of risks?

4 A. The best defenses against these sorts of risks involve
5 treating machines or systems that have been in the hands of
6 untrusted people or have been connected to untrusted networks,
7 such as the Internet, as at risk. And it is an air-gapping
8 strategy. What that means is that if something is in contact
9 with an untrusted person or untrusted network, it is considered
10 at risk. If something is in contact with an at-risk system, it
11 as well becomes at risk.

12 So it's a kind of contagion model of thinking about how the
13 risk of intrusion happens. And that is justified by the fact
14 that sophisticated threat actors do engage in multi-hop
15 intrusions in which they break into one system, use that as a
16 vehicle to compromise another one and so on through a chain of
17 systems.

18 The best defense against that is air-gapping and treating
19 anything that has been in contact with an untrusted person or
20 device that is untrusted.

21 Q. Now, in cybersecurity do you always know who your
22 adversaries are?

23 A. Not always. Certainly there are external adversaries,
24 but there is a lot of concern as well about insider threat,
25 which is when a person who is allowed into a trusted role, even

1 if only a little trusted, turns out to be compromised. Either
2 they are actively malicious or they are somehow coerced.

3 Q. You mentioned earlier that Georgia was relying on
4 certification from 2006, I believe. Is certification of the
5 system by the Secretary of State a defense to the kind of
6 vulnerabilities that you are talking about?

7 A. Certification is a process that attests that certain
8 steps have been taken to examine the system. But
9 vulnerabilities that are discovered after a certification occurs
10 need to be considered freshly. And it is common to make changes
11 to a system, even if it has been previously certified, if new
12 information comes to light about vulnerabilities.

13 Q. Are you familiar with the concept called
14 return-oriented programming?

15 A. Yes.

16 Q. What is that?

17 A. Return-oriented programming is a way of -- it's a
18 particular advanced technique for gaining control of a system by
19 providing through a normal input port. So one way of thinking
20 about it is -- return-oriented programming might be used across
21 the Internet where someone sends a malicious file to a machine
22 or sends a malicious query to a machine. And when it arrives,
23 it causes the attacker to get control of a system.

24 So it is a way of getting control of a system through a
25 port that is normally used only for a user to provide input as

1 opposed to -- it is another path for installing software into a
2 system.

3 Q. Is that path available on these machines?

4 A. Return-oriented programming is available as a method
5 on virtually every system that exists. There are a few advanced
6 defenses against return-oriented programming but they are not
7 present on this system.

8 Q. I'm just going to grab a couple of exhibits.

9 THE COURT: Mr. McGuire, do you think that we will be
10 able to get through this today?

11 MR. MC GUIRE: Yes, your Honor. I'll speed up to make
12 sure we do.

13 THE COURT: I just wanted to inquire because I wasn't
14 given any indication by the parties that it would take more
15 than a couple of hours. I have time today but I'm starting
16 a trial tomorrow.

17 MR. MC GUIRE: We plan to conclude today.

18 [Brief pause.]

19 MR. BRYAN: Excuse me, your Honor, while he's checking
20 for his other exhibits, I would like to clarify exactly
21 where we stand with the initial exhibits. I know
22 Exhibit 1 -- I don't recall counsel tendering the specific
23 portion of this packet of documents. I want to be clear
24 exactly what has been and what has not been proffered.

25 THE COURT: It hasn't been proffered at this point.

1 He was examining the witness about it but decided to
2 proceed in a different fashion so I has not been tendered.

3 MR. BRYAN: Thank you, your Honor.

4 THE COURT: There are only three exhibits that have
5 been admitted: 29, 6, and 26.

6 [Brief pause.]

7 BY MR. McGUIRE:

8 Q. Mr. Felten, I handed you three exhibits marked for
9 identification as Plaintiff's 20, 27, and Plaintiff's 28. I
10 would like to direct your attention to Exhibit 20.

11 A. Okay.

12 Q. Do you recognize this document or this page?

13 A. I have seen this before.

14 Q. And do you recall where you have seen it?

15 A. I don't recall what the source was.

16 Q. So you --

17 MR. HEIDT: Your Honor, Secretary of State objects.

18 He can testify as to the --

19 THE COURT: Counsel, if we could give him an
20 opportunity, just as I indicated to Ms. Burwell, to attempt
21 to lay a foundation. I will give you an opportunity to
22 object.

23 MR. HEIDT: Thank you, your Honor.

24 BY MR. McGUIRE:

25 Q. Mr. Felten, do you see at the bottom right where it

1 says Center for Election Systems?

2 A. I do.

3 Q. What is that?

4 A. That is the CES, Center for Election Systems, at
5 Kennesaw State, which we were discussing previously.

6 MR. MC GUIRE: Your Honor, I move to admit this
7 document as Exhibit 20.

8 THE COURT: Any objection?

9 MR. HEIDT: Your Honor, he has no personal knowledge
10 of this document. He can testify as to the types of
11 standards in an expert capacity.

12 THE COURT: Any objection on behalf of Fulton County,
13 Ms. Burwell?

14 MS. BURWELL: Same objection.

15 THE COURT: For DeKalb?

16 MR. BRYAN: Same, your Honor.

17 THE COURT: Cobb?

18 MR. WHITE: Same, your Honor.

19 THE COURT: And counsel for Mr. Kemp, I didn't get
20 your name. I have Ms. Colangelo's name but not yours.

21 MR. HEIDT: Josiah Heidt.

22 THE COURT: Last name?

23 MR. HEIDT: Heidt, H-e-i-d-t.

24 THE COURT: Thank you. The objection to admission of
25 this item is sustained.

1 BY MR. McGUIRE:

2 Q. Mr. Felten, are you aware that Georgia has claimed
3 that its current voting system is certified federally?

4 A. Yes, I'm aware of that.

5 Q. What does federal certification mean?

6 A. Well, it is certification with respect to standards
7 that are promulgated by federal agencies, currently by the
8 Election Assistance Commission.

9 Q. And before the Election Assistance Commission, who
10 promulgated federal standards for certification?

11 A. I believe that was the Federal Election Commission, I
12 believe.

13 Q. And is there an organization called NASED?

14 A. Yes. That, I believe, is the National Association of
15 State Election Directors.

16 Q. And do they have any role in certification or have
17 they ever?

18 A. I believe they did establish standards, yes.

19 Q. Are you aware of how the certification process works
20 at the federal level?

21 A. At the federal level, there are certification
22 standards that are written and there are independent
23 laboratories that are hired to evaluate systems against those
24 standards.

25 The procedures that are used for that examination and

1 things like how the testing labs are selected, whether they are
2 selected by the vendor or not and so on, those have changed over
3 time.

4 Q. What about state certification? What do you know
5 about that?

6 A. State certification, each state would have its own
7 standards or requirements that come from state law. And there
8 would be state law that would set down exactly what is required
9 there.

10 Q. So when a state or federal government agency certify a
11 voting system, what exactly are they certifying?

12 A. They are certifying compliance with the written
13 standards. Whatever the written standards are that would appear
14 in a certification document, that is what is being certified.

15 Q. And as far as what they are looking at, how specific
16 and how general is it in terms of the voting system that they're
17 looking at?

18 A. The certification would be done with respect to a
19 voting system which includes the various components that we
20 talked about before. Generally, election system certification
21 is certifying a broad system. There are in some cases in
22 addition certifications for individual components which speak
23 only to that component in isolation and not to the broader
24 system.

25 Q. So, in other words, are you saying that they certify

1 all the components as they work together?

2 A. Yes. It is a certification of the overall system that
3 is indicated.

4 Q. And, to your knowledge, what is the impact of changes
5 to the system on an existing certification?

6 A. Well, this is a standard issue that comes up a lot in
7 testing and evaluation of systems, the difference between
8 looking at individual components in isolation versus looking at
9 components together. That is generally not considered a valid
10 practice, to certify a bunch of things separately and then stick
11 them together or to create some kind of Frankenstein version
12 where you take a piece from over here and a piece from over
13 there and just connect them to each other and treat the result
14 as if it has been certified.

15 One of the big challenges in systems engineering and in
16 security is that when you plug complex systems together,
17 unexpected things happen. And you want to be able to test and
18 validate against the full system so that you catch all of those
19 issues.

20 Q. Now, you mentioned that this particular machine runs
21 on a version of Microsoft Windows; correct?

22 A. Yes.

23 Q. Now, I get automatic updates all the time on my
24 laptop. Does that happen with voting machines?

25 A. It would not. It would require active steps by system

1 administrators in order to install new system updates on these
2 systems. And as I understand it, Georgia has not done so since
3 the certification that they pointed to in 2005.

4 Q. So are you saying they haven't updated the operating
5 system on this machine, to your knowledge, since 2005?

6 A. To my knowledge, they have not. And if they had, this
7 would be a different software version and the certifications
8 they point to would no longer apply to it.

9 Q. So by updating the operating system, that would
10 require new certification?

11 A. It would require a new certification and it would
12 require new testing to make sure that the certification
13 requirements are still met.

14 Q. So how are operators of these kinds of machines which
15 are software based, how are they supposed to stay ahead of
16 emerging security threats like new hacking tricks?

17 A. The best method for protecting the vote casting part
18 of the system involves having a redundant record that the voter
19 can see because that then is available for post-election
20 comparison and auditing. That is a safeguard that is used in
21 many places, and it allows detection of incorrect electronic
22 results no matter how they arise, whether they arise through
23 malice or through error. You will detect them, if they are
24 large enough to affect an election, with high confidence if you
25 follow those procedures.

1 But in the absence of a voter-verified -- a directly
2 voter-verified record of the vote, you can't have that
3 confidence and you are always at risk that new vulnerabilities
4 will come to light and put your system at risk.

5 Q. And are you talking about the voter-verified records,
6 that would be a paper printout for the voter to say this is how
7 I voted?

8 A. There are different types of voter-verified records.
9 The most common one occurs in optical scan voting where, say,
10 the voter will fill out a paper ballot, and then that will go
11 into a ballot box at the polling place. And that can be done --
12 the paper ballot can be fed through a scanner, which keeps an
13 electronic record, and then the paper ballot coming out of the
14 scanner would fall into an old-school ballot box.

15 And that way you have -- that way election officials have
16 that paper record that the voter saw, which allows you to
17 connect the dots from a security standpoint between what the
18 voter saw and did and what the records show post-election.

19 Now, that is one kind. So it could be paper form that is
20 scanned. It could be a system that is like this, that prints
21 out a paper version of the vote that the voter can look at,
22 which the system then keeps. There are some like that. Or you
23 could use hand-counted paper ballots and get the same effect.

24 Q. Just to be clear, does this system allow you to print
25 out a per voter record of how the voter voted?

1 A. No, it does not give you the ability to have a record
2 that the voter saw. The fact that the voter themselves saw the
3 record and was in a position to complain if it was wrong is the
4 key to making that end-to-end security work.

5 Q. So if you had to verify an election conducted on this
6 kind of voting system, is it fair to say you would be at the
7 mercy of what the system reports?

8 A. You would be. The system would have records. It
9 would be like that cashier who has multiple records. But
10 ultimately you are at the mercy of that machine and the records
11 that it recorded.

12 THE COURT: Mr. Felten, is there any evidence that the
13 record that is reported is not consistent with what the
14 voter sees on the screen before the ballot is cast?

15 THE WITNESS: There are not records sufficient to
16 determine whether the records in the machine are or are not
17 consistent with what the voter saw. The only records you
18 have are what the machine says the voter saw, which if the
19 machine has been compromised, is not trustworthy.

20 THE COURT: But as a practical matter -- I'm trying to
21 make sure I understand what the argument is. As a
22 practical matter, how would one accomplish changing the
23 individually recorded voting records of each voter or a
24 sanctum of voters based on votes cast using the DRE
25 machines and subsequently compiled for purposes of

1 tabulating the votes?

2 THE WITNESS: The scenario that we have been talking
3 about here involves a malicious person changing the
4 software that runs in the voting machine that interacts
5 with the voter.

6 THE COURT: I understand that.

7 THE WITNESS: And there are different ways that could
8 work. But the way it would be most likely is that the
9 machine would interact with the voter and show the voter
10 the same menus and same confirmation screens as normal.
11 But when it came time for the step where the voting machine
12 recorded in its internal memory how the voter voted, it
13 would record something different.

14 And there is nothing inherent about the design of this
15 system that prevents that happening.

16 THE COURT: But at this point based on your research,
17 is there any evidence that kind of manipulation has
18 occurred?

19 THE WITNESS: We don't know whether it has or has not
20 occurred. Had we had machines that kept independent
21 voter-verifiable records, it would be easier to tell. But
22 we do not know of any incident in which that attack has
23 occurred and been detected.

24 THE COURT: How would you even be able to confirm that
25 with an independent voter-verifiable record if it is your

1 position that that record is susceptible to being
2 compromised?

3 THE WITNESS: As an example, in a scenario where the
4 voter fills out a paper ballot and that gets fed through a
5 scanner and then that paper record filled out by the voter
6 goes into a ballot box, after the election you would have
7 electronic results in the scanner, which we're presuming
8 would be manipulated. So then you can do a post-election
9 comparison or post-election audit which compares those
10 electronic records against the paper ballots that are in
11 the ballot box.

12 And that would detect if there are inconsistencies.
13 So you would find an inconsistency when you compared paper
14 against electronic. You could, on the one hand, compare
15 every paper ballot against its matching electronic ballot.
16 But in practice there are statistical audits you can do,
17 much like a financial audit where you don't look at every
18 expenditure that goes out but you sample, and by statistic
19 means you establish that if there was cheating, there was
20 hardly any.

21 THE COURT: But wouldn't it be possible to manipulate
22 even paper ballots as confirmation of the electronic
23 ballots in some way? If that was the intention, isn't
24 there also a way that could be accomplished such that we
25 would not be able to possibly detect that either?

1 THE WITNESS: The manipulation of paper ballots would
2 be through something like ballot box stuffing, or somebody
3 getting their hand on the ballot box and taking papers out
4 or putting papers in.

5 THE COURT: Or not counting certain ballots or
6 misrepresenting what those ballots --

7 THE WITNESS: Misrepresenting what they are. To cheat
8 the paper -- so it might be possible in principle for
9 someone to cheat the paper ballot count and cheat the
10 electronic count consistently. But those require very
11 different kinds of activities by that bad actor.

12 The electronic tampering would happen before the
13 election, the tampering of paper ballots would happen after
14 the election. So, therefore, it would require access more
15 than once.

16 We also, just based on history and the practical
17 logistics of how paper systems work, we have a better
18 understanding of how to make sure that there has not been
19 tampering with the paper ballot box, which fundamentally
20 relies on a bunch of independent eyes being on that ballot
21 box over time.

22 If the box is on a table in the middle of the room,
23 you have observers from the press and from different
24 parties or candidates watching it. You can limit the kinds
25 of tampering that can happen through that system. Whereas

1 electronic tampering --

2 THE COURT: But you can't eliminate it, is my point.

3 THE WITNESS: You cannot eliminate it, right. So what
4 elections security experts primarily recommend is a system
5 which has redundancy. An electronic and a paper record
6 that are cross-checked, and that gives you the highest
7 level of security when you can.

8 And if that is not available, then to use hand-counted
9 paper because the many eyes on the ballot box approach is
10 the most simple, reliable method.

11 THE COURT: One more question, process question as to
12 that verification system. Were there a system with both
13 electronic system and paper ballot requirements for
14 verification purposes, how would that work?

15 THE WITNESS: So this is done in a bunch of states,
16 the largest one being California, where there is a protocol
17 that is usually executed at the polling place at the end of
18 the day where sometimes at, say, a county office where some
19 of the paper ballot boxes are selected at random and those
20 are hand counted. And then the selected hand-counted
21 ballots are compared against the electronic records that
22 correspond to them.

23 THE COURT: So a voter would be required to cast an
24 electronic ballot and separately cast a paper ballot; is
25 that what I'm understanding?

1 THE WITNESS: No. The way the system typically works
2 is -- in the most common system, the voter fills out a
3 paper ballot and they feed it into a scanner at the polling
4 place. And the scanner does two things with the voter.
5 First it checks to make sure the voter is valid, that they
6 haven't double voted or something. If so, it will kick
7 back the ballot with an error message.

8 But if the ballot is valid, it will go through the
9 scanner. The scanner will keep an electronic record and it
10 will fall into a ballot box on the other side.

11 So you fill out the paper ballot, you feed it into the
12 machine, and then you leave. That is a system that is used
13 in many places, and it is the one that election security
14 scholars typically recommend.

15 THE COURT: Thank you. Mr. McGuire?

16 MR. McGUIRE: Thank you.

17 BY MR. McGUIRE:

18 Q. Just to follow up on the Judge's questions. You
19 demonstrated a modification of a DRE like this in your lab;
20 right?

21 A. Yes.

22 Q. Are you aware whether anyone -- and other people have
23 demonstrated the same thing; correct?

24 A. Correct, yes.

25 Q. Are you aware of any demonstrations where both the

1 electronic record and the additional printed paper record of a
2 vote have been modified?

3 A. Not in the kind of systems that I described today, no.

4 Q. And the kind of systems you described are specifically
5 DRE. What else?

6 A. I'm sorry, the DRE, yes. DREs, because they don't
7 keep paper records -- I understand it is outside the scope of
8 the question. The kinds that keep paper and electronic records
9 in the way I described, that would be something like precinct
10 count optical scan, the system I described to the judge a moment
11 ago. Or also a DRE with a paper record printer, sometimes
12 called a voter-verified paper audit trail attached.

13 And I don't know of any examples of successful manipulation
14 that reaches both the electronic and paper records in a way that
15 the voter would not spot it.

16 Q. Now, you understand that a voting machine, to be
17 approved in Georgia, must be capable of being used by the voter
18 safely and accurately; correct?

19 A. I understand that is what the law says.

20 Q. What is your understanding of what safely means in the
21 context of a voting system operating?

22 A. I understand safely as referring to security, that the
23 system will protect against manipulation of the record that
24 leads to the vote being counted incorrectly.

25 Q. And what is your understanding of accurate operation

1 of a voting system?

2 A. Accurate means that the votes are counted as cast.

3 Q. So do you have an opinion whether Georgia's DRE voting
4 system can be safely and accurately used by voters?

5 A. I do. My opinion is that the system cannot be safely
6 and accurately used by voters.

7 Q. And do you have an opinion whether -- in your opinion,
8 is it practical to use a voting system that can't be safely and
9 accurately used?

10 A. No, that should not be used.

11 MR. MC GUIRE: Just a moment, your Honor. May I have a
12 moment with counsel, your Honor?

13 THE COURT: Yes.

14 [Brief pause.]

15 BY MR. MC GUIRE:

16 Q. Just finally, I guess, Mr. Felten. You testified
17 before Congress on these issues; right?

18 A. I have, yes.

19 Q. Did you perform any kind of demonstration in that
20 testimony?

21 A. Yes. At a committee hearing at the House of
22 Representatives, I performed a demonstration on a machine like
23 this one in which I inserted malicious software and then carried
24 out a simulated election. And the results were reported
25 incorrectly because of the malicious software.

1 MR. McGUIRE: Your Honor, we have a video of this
2 demonstration. It is about three minutes, and we would ask
3 to be able to project it, assuming technology allows it, if
4 your Honor is willing to see it.

5 THE COURT: Any objection on behalf of the Secretary
6 of State, Mr. Heidt or Ms. Colangelo?

7 MR. HEIDT: Mr. Heidt. I apologize. No, your Honor.

8 THE COURT: Ms. Burwell?

9 MS. BURWELL: Your Honor, we would object because this
10 witness already testified that he is not aware of any
11 incursions with respect to these particular machines. And
12 so for him to now show some video that shows something that
13 is not present in the current case we believe is irrelevant
14 and prejudicial.

15 THE COURT: Mr. Bryan?

16 MR. BRYAN: We object, just to the extent that if
17 there is anything in this video that has already been
18 testified to here, it would be duplicative. Otherwise, if
19 there is anything that the witness wants to testify to, he
20 can do it in open court.

21 THE COURT: Mr. White?

22 MR. WHITE: Your Honor, Cobb County would object. To
23 the extent this video doesn't show a DRE system, I don't
24 see how it is relevant to the issues in this case, the
25 Georgia DRE system. It is not relevant. If he did this

1 with some other system and other software, it doesn't seem
2 to be relevant here today.

3 THE COURT: And as a matter of foundation,
4 Mr. McGuire, what system is this that the video would
5 depict?

6 BY MR. McGUIRE:

7 Q. Mr. Felten, can you tell us the answer to that?

8 A. Yes. It was an AccuVote-TS system like this one here.

9 Q. And are you aware of the software version it was
10 running?

11 A. It was running version 4.3.15 of the Diebold software.

12 THE COURT: Based on the foundation that has been
13 laid, the objections of Fulton, DeKalb, and Cobb are noted.
14 I am going to allow the playing of the video for
15 demonstrative purposes for the Court.

16 MR. McGUIRE: Thank you.

17 BY MR. McGUIRE:

18 Q. Mr. Felten, can you tell us again before whom was this
19 testimony?

20 A. This was, if I remember correctly, a hearing of the
21 Committee on House Administration.

22 Q. Were you under oath when you gave this testimony?

23 A. I was.

24 [Video played.]

25 THE COURT: Anything else, Mr. McGuire?

1 BY MR. McGUIRE:

2 Q. Just one question for you, Mr. Felten. Is there any
3 reason that you are aware of why a bad actor couldn't commit
4 that exact same attack on a large scale in Georgia?

5 A. That is still possible on the Georgia machines today.

6 Q. Thank you.

7 MR. McGUIRE: That is all the questions that we have
8 on direct for this witness.

9 THE COURT: On behalf of the Secretary of State,
10 Mr. Heidt or Ms. Colangelo?

11 MS. CORREIA: Your Honor, I'm actually, just to
12 correct the record, I'm Cris Correia from the Attorney
13 General's Office.

14 THE COURT: What is your last name?

15 MS. CORREIA: Correia, C-o-r-r-e-i-a. And Mr. Heidt
16 is actually going to cross-examine the witness. Although I
17 would ask your Honor -- and I can do it after
18 cross-examination but before we go on with more witnesses
19 and testimony -- that the Court consider the sovereign
20 immunity issues in this case because they are
21 jurisdictional. Regardless of what testimony is put forth
22 today, sovereign immunity is a complete bar to this
23 lawsuit.

24 THE COURT: Counsel, at this point the witness is on
25 the stand and I'm moving forward with examinations as I

1 indicated I would. You will have an opportunity to make
2 those arguments at the close of the day.

3 MS. CORREIA: Thank you.

4 MR. HEIDT: Good, what I believe is now afternoon,
5 your Honor. Josiah Heidt from the Attorney General's
6 Office on behalf of defendant Secretary of State Brian
7 Kemp.

8 CROSS-EXAMINATION

9 BY MR. HEIDT:

10 Q. Good afternoon, Mr. Felten. I would like to first
11 refer to the example tape that we all just witnessed. In this
12 example you did not first cast a vote and then check the totals
13 to make sure the DRE was functioning properly, did you?

14 A. No, but that would not have made a difference. That
15 is something that we did in the lab. We showed that in testing
16 scenarios that this test could report the correct results but
17 then on election day it could report incorrect results.

18 Q. But just to be clear, in the video you did not
19 demonstrate any sort of pre-voting testing of that machine?

20 A. Not in that video, no. I had five minutes.

21 Q. Thank you. In addition, you don't have any knowledge
22 that any part of Georgia's voting system was connected to the
23 Internet or will be connected to the Internet prior to the
24 June 20th Sixth Congressional District vote, do you?

25 A. I don't know that any part has been connected directly

1 to the Internet. But given how the procedures work, indirect
2 connections would seem to have occurred.

3 Q. In addition, you don't know of a single instance in
4 which a Georgia DRE, a GEMS server -- that is the Global
5 Election Management System servers -- or ExpressPoll has been
6 tampered with, do you?

7 A. I don't know whether they have been or not.

8 Q. You don't know?

9 A. That is correct.

10 Q. You don't know, also, of any specific instance in
11 which a flash drive or some other similar device has been used
12 to tamper with the Georgia DRE, a GEMS server, or ExpressPoll,
13 do you?

14 A. I don't know whether that has happened or not.

15 Q. And, finally, you don't know of any specific evidence
16 that a voting machine that will be used in the June 20, 2016 --
17 2017 election, excuse me, that we're all here about has been
18 tampered with or compromised in any way, do you?

19 A. Again, I don't know whether they have or not.

20 MR. HEIDT: That is all I have, your Honor.

21 THE COURT: Thank you. Ms. Burwell?

22 MS. BURWELL: I have no questions for him, your Honor.

23 THE COURT: Mr. Bryan?

24 MR. BRYAN: No questions, your Honor.

25 THE COURT: Mr. White?

1 MR. WHITE: No questions.

2 THE COURT: May this witness step down?

3 MR. McGUIRE: I have one question on redirect.

4 REDIRECT EXAMINATION

5 BY MR. McGUIRE:

6 Q. Opposing counsel mentioned testing before the election
7 was conducted. To your knowledge, does the DRE operate -- is
8 that the same mode in the pre-election test as it operates on
9 during the election?

10 A. There is a pre-election testing mode and the DRE would
11 know if it was in that mode.

12 Q. So that is not the actual mode that is used during the
13 election?

14 A. There is a pre-election testing mode. During election
15 mode there is a different mode. And malicious software could
16 know whether it was in pre-election testing mode or not. And it
17 could, in addition, use other means of telling whether it was in
18 a test or not.

19 Q. Thank you.

20 MR. McGUIRE: No further questions, your Honor.

21 THE COURT: Anything else from any of the defendants?

22 MR. HEIDT: Briefly, your Honor.

23 RECROSS-EXAMINATION

24 BY MR. HEIDT:

25 Q. Just to clarify, in the video that we all watched you

1 mentioned that you did do some testing back at the lab but the
2 video does not demonstrate that you did any sort of pre-election
3 testing the day you made the demonstration, does it?

4 A. I don't recall whether we did do that testing on the
5 day of or not. I know that we did the same -- we did in the
6 same scenario, and I know what the state of that machine was in
7 that demonstration.

8 And just to be clear, because of the very limited time I
9 had to testify there, the tampering with the machine is
10 something that we did before the beginning of my testimony. So
11 you did not see the tampering step in that process. Although it
12 only takes about one minute, I didn't have one minute to spare.

13 Q. And we also did not see the testing step; correct?

14 A. Correct, you did not see that in the video.

15 MR. HEIDT: Nothing further, your Honor.

16 THE COURT: Anything else on behalf of Fulton County?

17 MS. BURWELL: No, your Honor.

18 THE COURT: DeKalb?

19 MR. BRYAN: No, your Honor.

20 THE COURT: Cobb?

21 MR. WHITE: No, your Honor.

22 THE COURT: You can step down.

23 Any other witnesses, Mr. McGuire?

24 MR. MC GUIRE: Yes, your Honor. We would like to call
25 Mr. Richard DeMillo.

THE COURT: Is this your last witness?

MR. MC GUIRE: He is our second expert and we have one more after him. He should be much shorter. They should be shorter from here forward.

RICHARD DeMILLO,

having been first duly sworn, was examined

and testified as follows:

DEPUTY BRYANT: Please state and spell your full name.

THE WITNESS: My name is Richard DeMillo. Last name is spelled D-e-M-i-l-l-o.

DIRECT EXAMINATION

BY MR. MC GUIRE:

Q. Good afternoon, Mr. DeMillo. Mr. DeMillo, where do you work currently?

A. I currently work at Georgia Tech.

Q. What is your position there?

A. I'm a professor of computer science.

Q. And how long have you been in that position?

A. I have served at Georgia Tech altogether 27 years.

Q. Have you had other -- have you had any leaves from Georgia Tech during that period?

A. Not necessarily leaves. I left Georgia Tech for other jobs and then came back again.

Q. Tell us about your educational background.

A. I have an undergraduate degree in mathematics from

1 St. Thomas University in Minnesota and a Ph.D. in information
2 and computer science from Georgia Tech.

3 Q. And what jobs other than Georgia Tech have you worked
4 at?

5 A. Most recently I was the chief technology officer at
6 Hewlett-Packard. I left that position in 2002 to return
7 to Georgia Tech as a dean. Before that I was the vice president
8 in charge of computing research at Bell Communications Research
9 Corporation, a spinoff of Bell Labs.

10 I have been the director of the Computer and Computation
11 Research Division at the National Science Foundation. I have
12 been a professor of computer science and director of The
13 Software Engineering Research Center at Purdue University.

14 I have been a visiting professor at the University of Padua
15 in Padua, Italy, and a professor of electrical engineering and
16 computer science at the University of Wisconsin.

17 Q. And of those, I believe was the 2002 position at
18 Hewlett-Packard most recent?

19 A. Yes.

20 Q. Tell us what you did as a chief technology officer at
21 Hewlett-Packard.

22 A. I had the worldwide responsibility for research and
23 engineering. All the product engineering teams reported up
24 through me, and I had responsibility for the overall budget for
25 the corporation.

1 Q. What is Hewlett-Packard's business?

2 A. Hewlett-Packard is an information technology and
3 services company. It makes computers, computer-related
4 products, self-professional services software, and provides
5 other services along those lines.

6 Q. Now, obviously, chief technology officer sounds like a
7 managerial position. Was there a technical component to it or a
8 technology component to it?

9 A. Yes. A chief technology officer spends about half of
10 their time on managerial administrative matters, half their time
11 understanding what goes on in the labs within the product
12 development divisions.

13 Q. And have you also worked for the Department of Defense
14 either as a contractor or as an employee?

15 A. Indeed. As a contractor. In the 1980s, I led a group
16 called the Software Test and Evaluation Project reporting to the
17 office of the Secretary of Defense. The goal of that effort was
18 to modernize the policies and procedure in the Department of
19 Defense for software intensive systems, mainly weapon systems,
20 but information systems of all kinds.

21 Q. And are there any particular projects that you have
22 done in connection with DoD that are worth noting?

23 A. A number of them during that period of time because
24 there was some very high-profile defense acquisitions. You may
25 remember the Patriot System that figured so prominently in the

1 first Gulf War was really one of the first software-intensive
2 anti-missile systems. And my team had the responsibility for
3 overseeing the software test and evaluation for that system.

4 Q. And you are using the word system. In your
5 understanding, what is a system?

6 A. A system composes -- it is comprised of the technical
7 elements, the components of the system, the people that operate
8 the system, the procedures, manuals, training, the environment
9 in which the system operates, and sometimes even the global
10 context in which the system is going to be deployed.

11 Q. Are you ever -- have you ever done any work on
12 standards for security in systems?

13 A. In a number of the systems that we looked at in the
14 Software Test and Evaluation Project, security was a principal
15 concern. It was a novel concern at the time. It was a system
16 that was previously not automated so we had to build up what the
17 standards would be, what the testing criteria would be for those
18 systems.

19 Q. And did you -- what was your role in authoring the
20 standards?

21 A. The overall policy was a policy statement that my team
22 and I wrote in 1985, I believe. And then the individual
23 policies for the Armed Services, for the Department of Defense
24 were written in those departments but we were consultants over
25 that period of time. This was all documented in the series of

1 reports that were made to the Secretary of Defense's office.

2 Q. So you basically have been in computer science since
3 the early '70s; is that right?

4 A. Since the late '60s.

5 Q. So you have seen the development of systems, computer
6 systems from their infancy until today?

7 A. Yes.

8 Q. What is the nature of your academic work at Georgia
9 Tech?

10 A. For the last ten years I have been the director of the
11 Center for 21st Century Universities, which is really a center
12 that is concerned with educational technology and modernizing
13 higher education to take advantage of technological advances.

14 Q. And in that position have you had any exposure to the
15 kinds of computer systems that are used in voting?

16 A. Prior to that I did.

17 Q. Prior to that. Can you tell us about that.

18 A. So when I returned to Georgia Tech in 2002, I had
19 another title. I was not only the dean. I was the director of
20 the Georgia Tech Information Security Center. And one of the
21 things that we were concerned with at that time was the
22 integrity of all kinds of systems, including voting systems.

23 Voting systems were just being automated to a large degree
24 at that point in time, and the information security problems
25 looked very interesting to us and we had expertise to apply to

1 them. So we did a lot of work in that area.

2 Q. And do you personally hold any patents?

3 A. I do.

4 Q. What are those?

5 A. The one that is probably most relevant is a 2002
6 patent on the effect of errors in cryptographic systems on the
7 accuracy of the system.

8 Q. What are cryptographic systems?

9 A. Cryptographic systems are any system that uses a
10 mathematical coding function to transform human readable text
11 into a coded form so it can be securely transmitted. It can't
12 be decoded unless someone has the correct key.

13 Q. How about publications? Have you published?

14 A. I have.

15 Q. Too many to mention or --

16 A. It's the advancing age. I have many more publications
17 than I can cite, yes.

18 Q. Can you think of any that are particularly relevant to
19 the issues of voting and security?

20 A. I have a number of publications that date from the
21 late 1980s, early 1990s in the area of security and in
22 particular in areas related to the Software Test and Evaluation
23 Project. I co-authored a book during that period of time called
24 Software Testing and Evaluation, which laid out procedures for
25 testing and evaluating these kinds of complex systems.

1 I also invented a series of testing techniques and a series
2 of security evaluation techniques that are still cited today as
3 the standards for testing and evaluation in those areas.

4 And I have to say that there was some non-technical
5 contributions, non-mathematical contributions in those areas. A
6 paper I co-authored in the late 1970s on how one comes to trust
7 software systems is still cited after 45 years or so.

8 Q. Have you had any involvement in certification of
9 security for computer systems?

10 A. The idea of certification for security isn't a single
11 concept. It depends on who is acquiring the system, what it is
12 being used for.

13 For defense purposes, there is a series of pamphlets that
14 describe certification requirements. They are called orange
15 books, purple books, green books, and the color of the book is
16 supposed to tell you something about the system that is being
17 certified. I have had contact with that.

18 MR. MC GUIRE: Your Honor, I would like to tender
19 Mr. DeMillo as an expert in the fields of computer
20 security, and testing and certifying computer systems for
21 security.

22 THE COURT: Is there any voir dire or objection on
23 behalf of the Secretary of State, Mr. Heidt?

24 MR. HEIDT: No, your Honor.

25 THE COURT: Ms. Burwell, for Fulton County?

1 MS. BURWELL: No, your Honor.

2 THE COURT: Mr. Bryan?

3 MR. BRYAN: No, your Honor.

4 THE COURT: Mr. White?

5 MR. WHITE: No, your Honor.

6 THE COURT: You may proceed.

7 MR. McGUIRE: Thank you, your Honor.

8 BY MR. McGUIRE:

9 Q. Mr. DeMillo, when you are looking at whether a
10 computer system is secure or not, is there a concept called the
11 adversary?

12 A. Yes.

13 Q. What is the adversary?

14 A. The adversary is an agent who is actively trying to
15 make the system fail. You assume with any kind of information
16 system that nature is going to be working against you, that
17 errors are going to crop up, unexpected events are going to
18 happen. And you try to design your systems to take advantage of
19 what you know about nature.

20 Security has additional complications because it is now no
21 longer nature. It's an intelligent adversary that is trying to
22 defeat the system.

23 Q. Do you need to know specifically who your adversary is
24 to prepare these?

25 A. You sometimes know something about the adversary but

1 the assumption that you make is that you know nothing about the
2 adversary's capabilities except that the adversary has a
3 capacity that you don't currently have.

4 Q. And what kinds of adversaries have you worked against
5 in the past in your security work?

6 A. Everything from individuals -- it could be an
7 individual hacker sitting at home. It could be industrial
8 espionage, so company against company trying to uncover
9 information, cracking security. It could be actors that are not
10 associated with the States, so terrorist groups are particularly
11 interesting these days in that regard.

12 And then most recently we have seen the rise of State
13 actors. The ability of governments to mount large-scale attacks
14 against seemingly small targets within adversarial nations has
15 grown dramatically in the last 15 or 20 years.

16 Q. In your work for DoD, you protected DoD systems
17 against attack?

18 A. Yes.

19 Q. Did those adversaries then include State actors?

20 A. It did, yes.

21 Q. Based on what you know about security, what kinds of
22 adversaries would you be worried about in connection with voting
23 systems?

24 A. Well, again, that is something that is in flux. We
25 know today, because there has been a recent release of

1 previously classified documents, that Russia, for example, has
2 made active attempts to penetrate electronic voting systems in
3 the U.S. and electronic systems at large, not necessarily the
4 individual machines but the entire system.

5 Q. Have you personally had any involvement in the details
6 of resolving those attacks or dealing with those attacks?

7 A. I have had experience in observing elections that have
8 taken place when those attacks have been possible both here in
9 the U.S. and overseas, oftentimes in environments where you know
10 there are bad actors out there. You can't necessarily get
11 access to them.

12 MR. HEIDT: Your Honor, we would like to object to
13 this line of questioning. He's not testifying to any
14 specifics about the Georgia voting system and we don't
15 think it is relevant.

16 THE COURT: Objection is sustained.

17 BY MR. McGUIRE:

18 Q. Mr. DeMillo, are you aware of an editorial by
19 Secretary of State Kemp in which he said, "Georgia's voting
20 equipment is regularly tested by experts and local election
21 officials across the state. We have complete confidence in its
22 accuracy and security"?

23 A. I have seen that editorial.

24 Q. As a security expert, what is your reaction to that he
25 has complete confidence in its accuracy and security?

1 A. I don't know that it is possible to have complete
2 confidence in the accuracy and security of any complicated
3 information technology system.

4 Q. And why is it not possible to have confidence,
5 complete confidence in the security of any system?

6 A. Because the more invasive a system is in society, the
7 more people interact with it, the more vectors there are for
8 creating bad things to happen in the system. And we have seen
9 this over the last few months with hacks into databases. We
10 have seen it with glitches in conducting votes.

11 Until you get your arms around what exactly is the whole
12 system, you don't really know what doors have been left open.
13 And these systems literally have no boundaries. We have
14 citizens, we have users, we have government agencies, we have
15 poll workers, we have observers. All of those are possible
16 sources of risk for a voting system.

17 Q. Have you heard of the phrase that goes to the effect
18 of steel doors and paper walls?

19 A. Yes. This is one of the principles. When you test a
20 system that is supposed to be secure, you want to guard against
21 assuming that because some particular component has been found
22 to be certified, found to be secured, that the whole system is
23 secure. Because it is entirely possible to have, as the phrase
24 goes, steel doors to vaults embedded in paper walls. Oftentimes
25 what an attacker will do is not attack the strength of the

1 system directly but go around it.

2 In fact, all the well-publicized intelligence attacks in
3 the last 25 years have not attacked a secure system directly.
4 It attacked individuals. Edward Snowden walked out with a thumb
5 drive that contained the SharePoint server for the director of
6 the National Security Agency. He didn't attack directly the
7 system --

8 MR. HEIDT: Your Honor, again we would like to
9 re-voice our objection to this line of --

10 THE COURT: I just need a phrase.

11 MR. HEIDT: Relevancy, your Honor.

12 THE COURT: I will allow the response. Are you done
13 with that portion of your response --

14 THE WITNESS: Yes, I am.

15 THE COURT: -- Mr. DeMillo?

16 You may move on.

17 BY MR. McGUIRE:

18 Q. Have you worked on a report for the Georgia Secretary
19 of State in connection with voting systems?

20 A. I supervised a report in 2007, 2008, yes.

21 Q. What was that report about?

22 A. This was a report that then Secretary of State Karen
23 Handel had asked us to prepare to examine the end-to-end
24 security of Georgia's election system, excluding the
25 vulnerabilities that you have heard about today with the Diebold

1 AccuVote-TS and not including the Center for Election Systems at
2 Kennesaw State.

3 Q. So your report didn't look at those issues?

4 A. No.

5 Q. What issues did it focus on?

6 A. We looked at the handling of materials. We looked at
7 the handling of equipment. We looked at training of poll
8 workers. We looked at opportunities for unauthorized people to
9 insert themselves in the process. We looked at the chain of
10 custody of critical materials during the votes. We looked at
11 access of unauthorized third parties to polling places.

12 We had a team of observers go out during the
13 November 2000 -- that can't be right. We had a team of
14 observers go out to whenever the previous election was to
15 conduct these observations, summarize them in questionnaires,
16 and that fed into the final report.

17 Q. And you heard Mr. Felten testify earlier?

18 A. Yes.

19 Q. Did you hear him talk about the voting system is more
20 than just the hardware/software?

21 A. Yes.

22 Q. Is what you looked at part of Georgia's voting system?

23 A. It is an integral part of the system. The system
24 doesn't function without those other parts of the system.

25 Q. What were your findings from that study?

1 A. Well, there were a number of, I would characterize
2 them as, mildly critical findings about the way that poll
3 workers were trained and monitored, consistency of their
4 responses to unexpected events. Those findings were summarized
5 in a list of recommendations for the Secretary of State.

6 Q. Are you aware of what came of those recommendations?

7 A. I am not aware if the Secretary of State ever
8 responded.

9 Q. If a system that you are in charge of defending has
10 been compromised, how would you know?

11 A. Well, the whole point of compromising the security of
12 the system is that you try to hide your trail so you oftentimes
13 don't know. That is one of the reasons that you build backups
14 into systems.

15 There is a principle in engineering called the Titanic
16 effect, and the Titanic effect is that if you believe the ship
17 is unsinkable, there is no use in putting life rafts on the
18 deck. And that principle takes on special significance for
19 security systems because you don't know sometimes that the
20 compromise has occurred until it is too late, so you better have
21 backups in place and things that allow you to roll back to a
22 previous configuration, previously trusted information and
23 continue operating.

24 Q. Are you aware of the incident that happened at KSU in
25 March?

1 A. Only through newspaper reports.

2 Q. What is your understanding of KSU's role in
3 administering Georgia's voting system?

4 A. I only know of their role through the study for the
5 Secretary of State's office and what I see on their website.
6 But as I understand it, they are responsible for provisioning,
7 maintaining, testing, and deploying the election technology for
8 all the state elections.

9 Q. And you heard Mr. Felten's testimony about intrusion
10 at KSU; right?

11 A. Yes.

12 Q. Would that be something that would concern you from a
13 security perspective?

14 A. Yes. Any time you can demonstrate that something has
15 happened, you, as a security engineer, have to assume that it
16 will happen again in the future.

17 So a laboratory demonstration of the vulnerability is
18 generally taken to mean that the security has been compromised
19 to the point you have to assume anyone can do it. Intrusion
20 into a facility has to be interpreted as meaning anyone can
21 intrude. So although I don't know the details of that, just the
22 idea of intruding into any information system makes you think
23 that it is possible to compromise the system.

24 Q. So if a system has been compromised once, are you
25 saying the presumption should be that it is compromised?

1 A. It is probably the single most important reason for
2 revising standards. So when you hear about the hacker
3 communities out there that are trying to test the strength of
4 the system, when those systems are compromised in the
5 laboratory, that is oftentimes the only thing that it takes to
6 take a standard back and revise the standard to improve it.

7 Q. So let's talk about hackers and their interest in
8 voting. What do you know about that, if anything?

9 A. I know that it is really a popular subject at the
10 hacker convention this summer.

11 MS. BURWELL: Your Honor, I object based on relevancy.

12 THE COURT: Sustained.

13 BY MR. McGUIRE:

14 Q. Mr. DeMillo, what do you know about this machine in
15 front of us?

16 A. I don't know an awful lot about that particular
17 machine. I just ordered it from eBay a couple weeks ago and
18 uncrated it before Dr. Felten showed up.

19 Q. So this is your machine?

20 A. It is my machine.

21 Q. Who is the seller on eBay?

22 A. I have no idea.

23 Q. Did you install software on it or did it come with
24 software?

25 A. It came with software.

1 Q. And do you have complete access to it?

2 A. Well, I have access to what it presents me. There is
3 a red card in that machine that is the voter card that came with
4 the machine. I would have to get from the Internet the
5 supervisor card that will allow me to get in and manipulate the
6 operating system.

7 Q. And that is available on the Internet also?

8 A. Yes.

9 Q. How much did this machine cost you?

10 A. \$245.

11 Q. Did you have to pass a background check before you
12 could buy it?

13 A. I did not.

14 Q. Did you have to prove you were an American citizen?

15 A. I did not.

16 Q. Was there any information at all that you had to
17 provide other than your credit card for payment?

18 A. Just credit card number and shipping address.

19 Q. As a security expert, does this -- does the
20 availability of a machine like this create a vulnerability for
21 an existing system using the same hardware?

22 A. I'm not quite sure what you are asking. If you were
23 to build a laboratory to do penetration testing, having easy
24 access to these systems would certainly be a big help.

25 Q. So do you have an opinion based on your expertise in

1 security whether Georgia's voting system can be safely and
2 accurately used by voters in this election?

3 A. I have --

4 MS. BURWELL: Objection, your Honor. I object based
5 on lack of foundation based on the testimony so far.

6 THE COURT: Your objection is overruled. You may
7 continue.

8 THE WITNESS: I have one major concern with Georgia's
9 system. I understand that there have been laboratory
10 demonstrations of the vulnerability by the lack of a
11 verified paper trail, voter-verified paper trail. That
12 makes me think that the system is probably not suitable for
13 use.

14 BY MR. McGUIRE:

15 Q. And, again, can you just elaborate on why does the
16 lack of a paper trail make you think it is not suitable for use?

17 A. Because it is a lifeboat that is not on the Titanic.
18 In case something were to happen, you have no way to roll back
19 to what the truth was and figure out what happened in that
20 election.

21 Q. And do you then also have an opinion as to whether the
22 use of a system that in your opinion isn't safe and accurate is
23 practicable?

24 A. It is not.

25 MR. McGUIRE: No further questions on direct, your

1 Honor.

2 THE COURT: Anything on behalf of the Secretary of
3 State?

4 MR. HEIDT: Yes, your Honor.

5 CROSS-EXAMINATION

6 BY MR. HEIDT:

7 Q. Good afternoon, Mr. DeMillo.

8 A. Good afternoon.

9 Q. I would like to first turn to this DRE machine you
10 said is your personal machine you purchased on the Internet.
11 When you made the purchase or any time after making the
12 purchase, is there any evidence that this particular machine is
13 a Georgia machine or was in any way involved with the Georgia
14 voting process?

15 A. Was this particular machine?

16 Q. This particular machine.

17 A. I have no way of knowing that.

18 Q. Is there any evidence of any Georgia Secretary of
19 State or any other official seal from the State of Georgia or
20 counties on either the box or the machine when you purchased it?

21 A. No. It came looking just like this.

22 Q. Was there any seal on the voter card when you
23 purchased it?

24 A. No. It was embedded in the machine.

25 Q. Thank you. In your testimony, you mentioned a report

1 that you authored for the Secretary of State's office from 2006
2 through 2007. In the ten years that have elapsed since that
3 time, have you performed any other formal review of the system
4 or processes used in Georgia for voting?

5 A. I have not.

6 Q. You don't have any knowledge that any of the voting
7 machines that will be used in the June 20, 2017, vote or any
8 other time in Georgia's voting having been connected to the
9 Internet, do you?

10 A. I have no knowledge either way of that. There is on
11 these machines a possibility to connect them to the Internet.

12 Q. But of the specific machines that will be used, you
13 have no knowledge they have been or will be connected to the
14 Internet?

15 A. I have no knowledge either way.

16 Q. Do you know of a single instance in which a Georgia
17 DRE, the GEMS device -- which is the Global Election Management
18 Servers -- or the ExpressPolls in Georgia have been tampered
19 with?

20 A. I would have no way of knowing that.

21 Q. Do you have any knowledge of a specific instance in
22 which a flash drive or some other similar device has been used
23 to tamper with a Georgia DRE, GEMS server, or ExpressPoll?

24 A. I have no specific knowledge of that.

25 Q. Do you have any knowledge of specific evidence that a

1 voting machine that will be used in the June 20, 2017, Sixth
2 Congressional District election has been tampered with or
3 compromised in any way?

4 A. I have no specific knowledge of that.

5 Q. Thank you.

6 MR. HEIDT: No further questions.

7 THE COURT: Anything, Ms. Burwell, on behalf of Fulton
8 County?

9 MS. BURWELL: No, your Honor.

10 THE COURT: Mr. Bryan, on behalf of DeKalb?

11 MR. BRYAN: Yes, your Honor, briefly.

12 CROSS-EXAMINATION

13 BY MR. BRYAN:

14 Q. Good afternoon, Dr. DeMillo.

15 A. Hello.

16 Q. My name is Bennett Bryan. I represent DeKalb
17 County -- I represent Maxine Daniels, who is the Director of
18 Elections for DeKalb County.

19 The very last question that you were asked on direct was is
20 the voting system and the DRE equipment here practical. Was
21 that the question?

22 A. Is it practical to rely on it as a secure voting
23 system.

24 Q. Okay. And what was your answer to that?

25 A. No.

1 Q. All right. And what exactly do you mean by practical?

2 A. I mean that you could never tell whether or not the
3 vote that was reported represented the will of the voters that
4 actually cast votes.

5 Q. And is practical a term of art that is used amongst
6 computer security experts?

7 A. It is a term that I know that is in the Georgia
8 statutes.

9 Q. Okay. So this is only -- you only said practical
10 because you were directed to that by the statute?

11 A. Because the question asked me that.

12 Q. Okay.

13 MR. BRYAN: No further questions.

14 THE COURT: Anything, Mr. White, on behalf of Cobb
15 County?

16 MR. WHITE: Yes, Your Honor, just briefly.

17 CROSS-EXAMINATION

18 BY MR. WHITE:

19 Q. Mr. DeMillo, I'm Daniel White. I represent Janine
20 Eveler at the Cobb Board of Elections.

21 You were asked about this incident at Kennesaw State, and I
22 believe your testimony following that question was that any time
23 you can demonstrate something happened, you have to assume it
24 might happen again?

25 A. Yes.

1 Q. Did you not follow that up with that you don't know
2 the details of the incident? So my question following that is:
3 Why are you concerned? If you don't know the details, what are
4 you assuming can happen again?

5 A. I'm not sure I understand the question.

6 Q. Okay. You testified that any time something happens,
7 you have to assume it can happen again. But then you
8 subsequently testified that you don't know the details. What
9 exactly are you concerned can happen again?

10 A. So it is a general principle in cybersecurity that you
11 assume the most extreme capabilities on the part of your
12 opponent because you don't know what their capabilities are. If
13 you see something demonstrated in the laboratory, you have to
14 assume that can be replicated by anyone with the same equipment.
15 I have no knowledge of what happened at Kennesaw State.

16 Q. But you are concerned that something that you have no
17 knowledge about could happen again and that gives you cause for
18 concern about this current run-off election?

19 A. No. What I was responding to was the issue that if it
20 had been compromised in the Center at Kennesaw State, has been
21 compromised once, could it have been compromised again.

22 Q. But you are unaware of any way in which the alleged
23 breach could affect this actually pending run-off election?

24 A. I have no knowledge either way.

25 THE COURT: Anything else, Mr. McGuire?

1 MR. McGUIRE: Very briefly.

2 REDIRECT EXAMINATION

3 BY MR. McGUIRE:

4 Q. Mr. DeMillo, just a few quick questions. You
5 testified that you wouldn't know if there had been an intrusion.
6 Would the officials at Kennesaw State or Center for Election
7 Services know, would they know if there have been intrusions?

8 A. Intrusions where?

9 Q. I believe counsel asked you would you know if a voting
10 machine had been compromised. Would they know if a voting
11 machine had been compromised?

12 A. Not necessarily, no.

13 Q. You were also asked about testing. Is testing an
14 adequate way to ensure the security of the system?

15 A. Well, testing comes in many forms. So you can do what
16 is done with Georgia's machines. That is test the equipment
17 against a set of certification requirements, and that is one
18 kind of testing.

19 But there is also something called operational testing
20 where you take the system into the field. You have typical
21 users. You have adversaries who are determined to break the
22 system. And you run, essentially, a war game against those
23 kinds of systems. So that is the range of things that you can
24 do by testing.

25 My understanding is that certification that is done is not

1 of the operational kind. It's against fixed specifications.

2 THE COURT: Your voice is trailing off a bit.

3 THE WITNESS: I'm sorry.

4 THE COURT: Will you adjust your seat so you are
5 speaking into the microphone, please.

6 THE WITNESS: Sure. My understanding is that the
7 testing that is done is against fixed certifications. It's
8 not operational testing.

9 BY MR. McGUIRE:

10 Q. So just to be clear, does that or does that not
11 suggest to you that the testing that is likely to be done in
12 this context is capable of identifying whether there has been
13 malicious activity in a system?

14 A. Well, I mean, testing is not prospective in that
15 regard. What it does give you is a sense of what the ground
16 truth of the system is, how resistant is the system to determine
17 the attack. And without conducting that test, you just have no
18 way of knowing.

19 Q. Are you aware of the -- the last question asked to you
20 about what you knew about the Kennesaw State intrusion, you said
21 that you didn't -- are you speaking of you don't have personal
22 knowledge?

23 A. I don't have personal knowledge of it.

24 Q. Are you aware of an incident report related to that
25 system?

1 A. I was shown an incident report, yes.

2 Q. Have you read that?

3 A. I read --

4 MR. HEIDT: Your Honor, I object. He just
5 stated that --

6 THE COURT: He is testifying as an expert, Counsel.
7 He can rely on other documents in formulating his opinion.
8 Overruled.

9 BY MR. McGUIRE:

10 Q. You are aware of that?

11 A. I'm aware of that report, yes.

12 Q. Mr. DeMillo, I've handed you what has been marked for
13 identification as Exhibit 2, and I would like to ask you to
14 turn -- it doesn't have page numbers on it but if you could flip
15 to the seventh page, please.

16 Is that the incident report that you are talking about?

17 A. This one with the Kennesaw State logo on top, yes.

18 Q. And that is actually on the ninth page; right?

19 A. Ninth page, yes.

20 Q. So you read this document?

21 A. Yes.

22 Q. So based on what you read here, as a security expert,
23 does what it says here concern you with respect to the security
24 of Georgia's voting system?

25 A. I can tell you how to interpret what I read here. I

1 don't know the context in which this was produced, but I can
2 certainly tell you how to read what the statement of the
3 Kennesaw officials is.

4 Q. Let me direct you to under the paragraph that says
5 "Background". Very last sentence says, "Log analysis identified
6 that the largest file identified contained voter registration
7 information for 6.7 million individuals".

8 Is that an area that would be of concern to you?

9 A. It would be, yes.

10 Q. Why?

11 A. Because that is the size of the database that was
12 released from the Secretary of State's office on CDs in 2015.
13 So whatever the access was at Kennesaw State, it involved a
14 comparable number of individuals.

15 Q. Let's turn to the next page, and there is a section
16 that is titled, "Opportunities for Improvement". And there is
17 some numbered points there.

18 A. Yes.

19 Q. From a security expertise perspective, I want you to
20 tell me what about these jumps out at you.

21 A. Well, just going in order, an issue that involves poor
22 understanding of risks by someone who is operating the IT system
23 is never a good thing to see. One, you want to have control of
24 the risk.

25 Operating vulnerable versions of any back-office system --

1 in this case the Drupal server -- is never a good thing to see.

2 To not have defined procedures for processing -- for
3 handling confidential data, which is what issue three says,
4 means that the security procedures were not adequately defined.

5 I'm not quite sure what four means. I can read what it
6 says. It says, "Staff is not aligned with University
7 Information Technology Services".

8 At my institution, that would mean that whatever security
9 policies for the institute were being enforced, there was some
10 other set of rules being --

11 MR. HEIDT: Your Honor, I would like to object. He
12 just stated he doesn't know --

13 THE COURT: Basis of your objection?

14 MR. HEIDT: Personal knowledge.

15 THE COURT: I'm trying to determine what we're doing
16 here. First of all, this document hasn't been admitted
17 into evidence, Mr. McGuire. And your questions you have
18 for this witness concerning his expert opinion, certainly
19 those are appropriate. But beyond that, you will need to,
20 I think, seek admission of this document before he
21 testifies about it.

22 BY MR. McGUIRE:

23 Q. So, Mr. DeMillo, this document, how did you first come
24 to see it?

25 A. It was in an email attachment. And to be honest, I

1 don't know who it came from but it looked like -- it was a
2 document attachment that had a bunch of emails. And in those
3 emails was this analysis from Kennesaw State.

4 Q. And how did you know that it was an analysis from
5 Kennesaw State?

6 A. It said at the outset that this was an analysis from
7 Kennesaw State. In fact, the emails that introduced the
8 internal -- the logo document said that this was an internal
9 audit that was conducted.

10 MR. McGUIRE: Again, your Honor, we have the issue
11 that this is part of the larger exhibit, but I am only
12 interested in admitting this particular part, which is the
13 Kennesaw State report.

14 THE COURT: Mark what you are interested in tendering
15 and move its admission.

16 MR. McGUIRE: I'll take off the other pieces. Thank
17 you.

18 MS. BURWELL: Your Honor, I have an objection.

19 THE COURT: If you will give us just a moment,
20 Ms. Burwell.

21 [Brief pause.]

22 MR. McGUIRE: I removed pages so we're only looking
23 at, under the marking of Exhibit 2, the document that
24 Mr. DeMillo has been testifying about.

25

1 BY MR. McGUIRE:

2 Q. Mr. DeMillo, can you confirm what you are looking at
3 is the email and the Kennesaw State report?

4 A. Yes, it is.

5 MR. McGUIRE: Your Honor, I would move for admission
6 of Exhibit 2, please.

7 THE COURT: I don't think that you've laid sufficient
8 foundation for its admission at this point, Counsel.

9 Was the report somehow used in the opinion that he's
10 rendered in court today? Will it be somehow used in an
11 independent opinion about what you will inquire?

12 MR. McGUIRE: Thank you.

13 BY MR. McGUIRE:

14 Q. So I will ask you for your opinion about whether this
15 document affects your -- was considered in your earlier opinions
16 you stated on the record, okay. Are you prepared to take a look
17 at this document and consider whether it changes your
18 earlier-stated opinions?

19 A. My opinions about the safety of the system? Well, my
20 original opinion was that system as it's used is not safe.
21 There is nothing to change that opinion.

22 Q. You earlier testified that in computer security there
23 is -- you presume that a system has been compromised once it has
24 been compromised?

25 A. Yes.

1 Q. Would this report strengthen or in any way weaken your
2 opinion on that point?

3 A. Well, it is not a forensic report so it actually
4 doesn't tell me what happened during the breach, so I can't
5 speak to that. I can speak to -- the document does tell you
6 enough information to speak to the factual things. There was a
7 data closet connected to the internal networks of the Kennesaw
8 State Center because that is in the document.

9 Q. Let's assume hypothetically that what is in this
10 report that came from Kennesaw State is true. If what is in
11 this document is true, would that bolster or detract from the
12 strength of your opinions that you have expressed here today?

13 A. It doesn't detract from them. Whether or not it
14 bolsters them you will have to see by doing more analysis. I do
15 look at the plain wording that is in the report and I see things
16 that require more explanation. The data closet, that unlocked
17 door, for example, in which the internal system was connected to
18 something outside is something that needs to be explored. An
19 access point --

20 MR. HEIDT: Your Honor, I object. He is testifying
21 from the document itself.

22 THE COURT: He is testifying based on considering a
23 hypothetical, which is permitted of expert witnesses.

24 Have you completed your response?

25 THE WITNESS: I have.

1 MR. McGUIRE: Your Honor, I would renew my motion to
2 Exhibit 2 on the grounds that it forms the basis of an
3 opinion he's expressed here today.

4 THE COURT: Any objection from the State, Secretary of
5 State?

6 MR. HEIDT: Yes, your Honor. He has not been able to
7 authenticate the basis of this document. He has no
8 personal knowledge of this document. And he cannot rely on
9 facts that he read from it to form a basis of his expert
10 opinion.

11 THE COURT: Mr. Burwell?

12 MS. BURWELL: Your Honor, I would mirror that
13 objection, as well as noting there is no evidence that this
14 document came from Kennesaw State. His name is not on here
15 showing that he received it or who he received it from and
16 so --

17 THE COURT: Who is he?

18 MS. BURWELL: The witness. So because the witness is
19 not -- it was my understanding he said he received it via
20 email. There is no indication from who he received it.
21 There is no indication he received it from anyone at
22 Kennesaw State who would actually have this particular
23 document if, in fact, it is a document from Kennesaw State.
24 And experts don't generally rely on random emails from who
25 knows where as part of an expert opinion. So we would

1 object to it.

2 THE COURT: Mr. Bryan?

3 MR. BRYAN: Same objection.

4 THE COURT: Mr. White?

5 MR. WHITE: Yes, same objection. And also when asked
6 by his own counsel or by counsel whether it would bolster
7 his opinion, he said he would need more information. So I
8 don't think that he testified he relied on this report.

9 THE COURT: The defendants' collective objections to
10 Plaintiff's 2 are sustained. It will not be admitted.

11 MR. McGUIRE: I have nothing further on redirect, your
12 Honor.

13 THE COURT: Anything else on behalf of the Secretary
14 of State?

15 MR. HEIDT: No, your Honor.

16 THE COURT: Fulton County?

17 MS. BURWELL: No, your Honor.

18 THE COURT: DeKalb?

19 MR. BRYAN: Yes, your Honor. Before the witness
20 leaves, I would like to move to strike that testimony from
21 the last question of direct where the expert offered his
22 opinion that the system is not practicable and then later
23 on in cross-examination admitted that he only used that
24 term because it came from the statute based on the leading
25 question from his counsel.

1 Therefore, I would move that is an improper legal
2 opinion testimony and be struck from the record.

3 THE COURT: All right. Anything else on behalf of
4 Cobb County?

5 MR. WHITE: No, your Honor.

6 THE COURT: The objection that you raised, Mr. Bryan,
7 is overruled and I will permit the testimony to stand.

8 Anything else from this witness?

9 MR. McGUIRE: No.

10 THE COURT: You may step down.

11 Next witness, please, Mr. McGuire.

12 MR. McGUIRE: Your Honor, we have Ms. Marilyn Marks,
13 or we're prepared to take a break if it suits the Court.

14 THE COURT: Your next witness, Counsel.

15 MR. McGUIRE: Marilyn Marks.

16 DEPUTY BRYANT: Raise your right hand.

17 MARIPLYN MARKS,

18 having been first duly sworn, was examined

19 and testified as follows:

20 DEPUTY BRYANT: State and spell your full name.

21 THE WITNESS: I'm Marilyn Marks. M-a-r-i-l-y-n,
22 M-a-r-k-s.

23 DIRECT EXAMINATION

24 BY MR. McGUIRE:

25 Q. Good afternoon, Ms. Marks. Just as a threshold

1 question: Exhibit 2, which we were just discussing with
2 Mr. DeMillo, is in front of you. Do you see that?

3 A. I do.

4 Q. Do you recognize that document?

5 A. I do.

6 Q. Do you have a copy of that yourself?

7 A. Yes, I do have a copy of that.

8 Q. How did you obtain your copy of that document?

9 A. A Georgia resident sent it to me as a result of an
10 open records request that he received.

11 Q. And what did he say about this document when he sent
12 it to you? Strike that.

13 What is your understanding of what this document is?

14 A. It is my understanding that this relates to --

15 MR. HEIDT: Your Honor, I object. This is hearsay.

16 She has no personal knowledge of this document.

17 THE COURT: Sustained.

18 BY MR. McGUIRE:

19 Q. Have you independently obtained a copy of this
20 document from anyone, apart from the Georgia elector that you
21 talked about?

22 A. I'm trying to think for a minute if I have an
23 independent copy. I am not sure whether one is included in the
24 subpoenaed response that Mr. Merle King, who I believe is here
25 in the courtroom, when we asked for subpoenaed documents. I

1 just can't recall whether one was in that document. You might
2 want to check the subpoena responses to see.

3 Q. Have you corresponded with anyone at Kennesaw State
4 about this document?

5 THE COURT: Can we establish who Ms. Marks is for the
6 record? I haven't heard any questions along those lines.

7 BY MR. McGuIRE:

8 Q. Ms. Marks, why don't you tell us what your interest is
9 in this case and why you are here.

10 A. Okay. I am the executive director of Rocky Mountain
11 Foundation and we're a non-profit non-partisan organization with
12 the majority of our focus and work in election transparency and
13 election verifiability. We do a lot of litigation work as well
14 as educational work in that area.

15 Q. Now, the name Rocky Mountain is not here. What is
16 your interest in Georgia?

17 A. Right. The corporation is in Colorado, and I was
18 living in Colorado before I moved back to the south a couple
19 years ago for family reasons. We just maintained the name even
20 though -- I'm in the south but most of the directors are in
21 Colorado.

22 Q. Rocky Mountain Foundation is a plaintiff in this case?

23 A. That is correct.

24 Q. What is Rocky Mountain Foundation's interest in
25 Georgia's election system?

1 A. Well, we have members from various states. We have
2 members who are Georgia electors who will be voting, plan to
3 vote in the Georgia Sixth election coming up June 20th. And, of
4 course, they are concerned about the unverifiable nature of the
5 machines.

6 Q. And do you have -- does Rocky Mountain Foundation have
7 members that are residents voting in CD-6 who are residents of
8 Fulton County?

9 A. Yes.

10 Q. What about DeKalb County?

11 A. Yes. We have members who are residents and electors
12 in DeKalb County who are also in CD-6.

13 Q. How about Cobb County?

14 A. Yes.

15 Q. And these electors who are your members, are they
16 aware of Rocky Mountain's involvement in this lawsuit?

17 A. At least the members that I know of who you have
18 referred to who are in the district. I don't know all of our
19 members are but the ones you referred to are.

20 Q. To turn back to Exhibit 2, you said Rocky Mountain
21 Foundation is involved in litigation?

22 A. Yes.

23 Q. What else do you do that would have had anything to do
24 with this Exhibit 2?

25 A. Okay. We do a tremendous amount of research on what

1 is going on in elections. Many times long before we get to
2 litigation we try to bring some type of either a complaint
3 trying to get administrative relief long before we get to a
4 courtroom. Other times we are filing FOIA, or open record
5 requests, so we can learn what is going on to educate the
6 public.

7 We'll sometimes do op-eds, sometimes seminars, that sort of
8 thing in order to educate the public on what may be happening in
9 any particular election.

10 Q. And was this document -- the open records request by
11 which this document was obtained, is that something that you
12 were involved in?

13 A. No, but it was obtained by one of our members.

14 Q. Did the member provide it to you?

15 A. Yes.

16 Q. Did the member provide it to you because of your role
17 with the Rocky Mountain Foundation?

18 MR. HEIDT: Your Honor, I object. She still has not
19 demonstrated she has any personal knowledge of this
20 document.

21 THE COURT: Overruled.

22 THE WITNESS: I'm sorry. Do you mind repeating your
23 question?

24 BY MR. McGuire:

25 Q. Did the member provide it to you because of your

1 executive director role in Rocky Mountain Foundation?

2 A. Yes, and because of my research work, or the
3 foundation's research work into the security of this election.

4 MR. McGUIRE: Given her testimony of how it came into
5 her hands and given that it bears information that appears
6 to be self-authenticating as a product of Kennesaw State
7 University, we renew our motion for admission of Exhibit 2.

8 THE COURT: On behalf of the Secretary of State?

9 MR. HEIDT: We object to its entry. It is not
10 self-authenticating and she has not testified to its
11 authenticity.

12 THE COURT: Fulton County?

13 MS. BURWELL: Same objection.

14 THE COURT: DeKalb?

15 MR. BRYAN: Same, your Honor.

16 THE COURT: Cobb?

17 MR. WHITE: Same.

18 THE COURT: The objections are, again, sustained. I
19 concur with the Secretary of State. This is not a
20 self-authenticating document. I also don't believe that
21 the witness has sufficiently established the authenticity
22 of the document. As such, the collective objections are
23 sustained.

24 BY MR. McGUIRE:

25 Q. Ms. Marks, I handed you what is marked for

1 identification as Plaintiff's Exhibit 18. Do you recognize
2 Plaintiff's 18?

3 A. I do.

4 Q. What is that?

5 A. This is a statement that shows the names of three of
6 our members -- one in Fulton, one in Cobb, and one in DeKalb --
7 who are all Georgia Congressional District Six electors who plan
8 to vote in this election.

9 Q. Are these the members that Rocky Mountain Foundation
10 is relying upon for standing?

11 A. Yes, they are.

12 Q. So, Ms. Marks, in Rocky Mountain Foundation's work on
13 DREs and voting systems, what is your understanding of state use
14 of DREs across the United States?

15 A. The DREs are basically being abandoned as a useful
16 type of voting equipment. In most --

17 MR. HEIDT: Your Honor, I would object. She can't
18 testify as an expert. She's not been tendered as one.

19 THE COURT: What is the nature of this testimony that
20 you are eliciting, Mr. McGuire?

21 MR. McGUIRE: She's providing information obtained
22 through her own research about the status of DRE usage
23 basically for the purpose of showing that other states
24 have, not only California, but other states are abandoning
25 it for reasons of reliability and safety.

1 THE COURT: But in what capacity is she offering the
2 testimony? She has not been qualified as an expert and you
3 have not demonstrated and no foundation has been laid that
4 she possesses any particular knowledge to qualify her to
5 testify about those matters.

6 MR. McGUIRE: I was just asking her what the results
7 of her findings were, not for an opinion, but just factual
8 questions that are within her knowledge as a researcher.

9 THE COURT: You have not established that is what she
10 does, though. I think that is the issue the Court is
11 making at this point.

12 MR. McGUIRE: I can certainly do some more
13 foundational questions.

14 THE COURT: All right.

15 BY MR. McGUIRE:

16 Q. Ms. Marks, obviously you are aware of the concern.
17 Tell us about the research that you do in voting.

18 A. Okay. Maybe I can start with my own personal
19 experience. I live in North Carolina. I'm a North Carolina
20 voter. And North Carolina has recently banned the use of DREs,
21 and starting January of next year, they will not be permitted to
22 be used in the state. Instead, paper-based voting systems that
23 are verifiable will be required.

24 I can also say that as I was bringing a complaint to the
25 State Board of Elections in North Carolina, I did some research

1 for that purpose and was able to determine from that that if we
2 go back to 2008, 23 states allowed DREs. Now we're down to
3 about 15 states. And that would have included North Carolina,
4 which has since abandoned the use or will be abandoning the use.
5 They banned the type of equipment, just like Maryland has
6 recently gotten rid of this equipment. So there is lot of
7 evidence of that.

8 Q. Let me ask you: How did you conduct the research that
9 led you to these findings?

10 A. Well, all of this is available on information like the
11 Secretary of State websites in each state. Certainly, there
12 have been many, many articles, dozens of articles written about
13 the reason that DREs must come out of service. So it is easy to
14 do the academic research -- the research of academic articles, I
15 should say -- as well as research on the Secretary of State's
16 website.

17 And in the case of North Carolina in the work I was doing
18 there, it was by going back and researching legislation in the
19 state and various other states that were related.

20 MR. MC GUIRE: Your Honor, counsel pointed out that I
21 forgot to move for admission of Exhibit 18, so I would like
22 to move for admission of Exhibit 18, please.

23 THE COURT: Any objection?

24 MR. HEIDT: No, your Honor.

25 THE COURT: Ms. Burwell?

1 MS. BURWELL: No, your Honor.

2 THE COURT: Mr. Bryan?

3 MR. BRYAN: No, your Honor.

4 THE COURT: Mr. White?

5 MR. WHITE: No, your Honor.

6 THE COURT: Plaintiff's 18 is admitted.

7 BY MR. McGuire:

8 Q. Ms. Marks, there are a couple other exhibits in front
9 of you that I would like to ask you to take a look at. One is
10 Exhibit 20. This has not been admitted. It is just marked for
11 identification at this point.

12 A. I found it now.

13 Q. Do you recognize the document that is, or the page
14 that is in Exhibit 20?

15 A. Yes, I do.

16 Q. How do you recognize it?

17 A. Okay. This was -- I located it on the Internet on a
18 document that had been published that showed the full agenda and
19 program materials of a meeting that took place of the IEEE at
20 Georgia Tech, and this was also with the Voting System Standard
21 group.

22 And this was one slide of a presentation that Dr. Merle
23 King of CSU [sic] made to the group. I think it was
24 February 4th or 5th, 2014.

25 Q. So this is public information that you found in your

1 research?

2 A. Yes, it is.

3 Q. And did anyone give this to you or you found it
4 yourself?

5 A. I found it myself, yes.

6 Q. And do you have any reason to believe that this is not
7 what it purports to be?

8 A. I would have no reason to believe that. In fact, it
9 is similar -- I have seen this slide in other formats from this
10 organization presented in other meetings.

11 MR. MC GUIRE: Your Honor, I move admission of
12 Exhibit 20. It's just a single page that says
13 "Certification" on it.

14 THE COURT: I'm looking at the document. On behalf of
15 the Secretary of State?

16 MR. HEIDT: We would object. She has not laid the
17 foundation that this is an authentic document. It is still
18 hearsay.

19 THE COURT: Fulton County?

20 MS. BURWELL: Your Honor, we agree the document is not
21 self-authenticating. She is asserting it came from some
22 governmental entity, so we object.

23 THE COURT: DeKalb?

24 MR. BRYAN: Same, your Honor.

25 THE COURT: Cobb?

1 MR. WHITE: Same.

2 THE COURT: The Court concurs with defense counsel. I
3 don't believe that sufficient foundation has been laid for
4 the admission of this document. As such, the objections
5 are sustained and it shall not be admitted.

6 BY MR. McGUIRE:

7 Q. Ms. Marks, have you done research into the versions of
8 software and hardware that are currently certified by the State
9 of Georgia?

10 A. I have.

11 Q. And what has your research shown those to be?

12 A. I have done a considerable amount of research. I
13 spent dozens of hours on this. And we also obtained documents
14 this morning as a result of the document subpoena that show that
15 the research I have done -- and I think it also responds, by the
16 way, the information that we got this morning also responds
17 specifically to this slide, which was in our document request.
18 It was referenced in our document request.

19 But it is quite clear that although Kennesaw State Center
20 for Election Systems has stated that the system is federally
21 certified and State certified, it is neither.

22 MS. BURWELL: Objection, your Honor.

23 THE WITNESS: The State --

24 MR. HEIDT: Objection --

25 THE COURT: When an objection is made, there is no

1 reason for you to try to talk over the lawyers or the Court
2 because the court reporter can't take everyone down.

3 The basis of -- I think I heard your voice first,
4 Ms. Burwell. The basis of your objection?

5 MS. BURWELL: Your Honor, there has been no
6 testimony --

7 THE COURT: Word or phrase.

8 MS. BURWELL: Lack of foundation.

9 THE COURT: Are you joining in that objection on
10 behalf of the Secretary of State?

11 MR. HEIDT: Yes, your Honor.

12 THE COURT: As to her statement regarding --
13 Ms. Burwell, lack of foundation as to the statement
14 regarding certification issue?

15 MS. BURWELL: Exactly.

16 THE COURT: Objections are sustained.

17 BY MR. McGuire:

18 Q. Have you, Ms. Marks, asked the Secretary of State to
19 provide a certification for Georgia's current voting system
20 configuration?

21 A. Yes.

22 Q. And in what format did you ask?

23 A. I was part of a group that filed a letter with the
24 Secretary of State on May 10th of this year. And in that
25 request, the most recent state certification was included in

1 that letter and we have done four follow-up letters.

2 Q. And what was the -- and that letter contained a
3 request for the certification documents?

4 A. Yes, it did.

5 Q. And what response did you receive, if any, to that
6 request for certification documents showing certification of the
7 current configuration?

8 A. The request was made to Secretary of State as well as
9 Kennesaw State University, and we have two different responses.
10 You were asking about the Secretary of State?

11 Q. What did the Secretary of State respond?

12 A. The Secretary of State did not respond until Monday
13 evening, I believe it was, or Monday afternoon, and said that
14 the documents would be available at their office for inspection.
15 And so we were able to obtain some copies on Monday night and
16 some copies yesterday of the State's certification -- materials,
17 although they don't support a certification.

18 Q. What --

19 MR. HEIDT: Objection to her last statement. She has
20 not been established as an expert as to certification.

21 THE COURT: Objection is sustained.

22 BY MR. McGuire:

23 Q. In the documents you have received back from the
24 Secretary of State and KSU, what is the nature of the
25 information those documents contain?

1 A. The state certification is a document with the
2 official seal of the State and it lists the various components
3 of the State system, from the DRE to the software and firmware
4 it is using, to the GEMS database, to the pollbooks used in the
5 polling place. And it is just a simple one or two-paragraph
6 statement with just a list of approved equipment.

7 Q. Have you received that kind of document from the
8 Secretary of State or KSU for multiple dates of certification?

9 A. Yes. In fact, there was a package that we did get
10 from the Secretary's office that included, I believe, all of the
11 prior certifications since the State first certified the system.

12 Q. And just to be clear, those statements of
13 certification list the type of software that is being certified?

14 A. Yes, and hardware, yes, and it's a fairly short list
15 each time.

16 Q. And you received that directly from the Secretary of
17 State's office?

18 A. Yes, we did, as part of the FOIA open records request.
19 And it was received just partly on Monday night and partly on
20 Tuesday when they finished making copies.

21 Q. And did you receive information about Georgia's
22 current system from Kennesaw State?

23 A. I did. I filed a FOIA request with Kennesaw State in
24 late May, around the 21st, something like that. And I did ask
25 for a list of the components that were in use -- the hardware,

1 the software -- that was in use today that they felt comprised
2 the voting system. And they responded that my list, with one
3 additional item, was the system in use in Georgia today that
4 people are voting on today.

5 Q. And that response articulated what the various
6 components were that were certified or did it not?

7 A. Well, actually those were two different questions. I
8 asked them which components were in use in hardware/software,
9 what was in use. And they told me that the list was correct and
10 added one more item to it.

11 And then I asked for documentation of the certification of
12 that equipment, was this a certified system they could produce
13 documentation for. And their answer to that is we have no
14 documentation of this being a certified system.

15 Q. Now, have you -- as an executive director of Rocky
16 Mountain Foundation, which is one of the plaintiffs, have you
17 also received court filings that have contained an affidavit
18 from Mr. Merle King?

19 A. Yes, I have.

20 Q. Does that contain any statements about certification?

21 A. Yes. His statement is that the system is federally
22 certified, although that disagrees with what the FOIA response
23 was from his office, which said they have had no documentation
24 for the federal certification.

25 Q. And did his --

1 MR. HEIDT: Your Honor, I would object. She has not
2 testified that the Secretary of State said anything. Just
3 that they produced documents.

4 THE COURT: Your objection is overruled.

5 BY MR. McGUIRE:

6 Q. So Mr. King's affidavit, did he identify the -- did he
7 provide a reference number for the certifications that you were
8 able to use?

9 A. Yes. So to the question of -- let's first deal with
10 federal certification. Mr. King gave the numbers of three NASED
11 systems, three different systems that had received certification
12 back in 2005. None of those, though, are the system that his
13 office says is in use today. I say "says". Excuse my common
14 language, your Honor. It does not reflect the information that
15 his office provided with a system that is in use today.

16 So the comparison of what is in use today per the FOIA
17 request compared to the systems that Merle King gave in his
18 document response do not match.

19 Q. Now, did you prepare any summaries of these document
20 productions by the Secretary of State and KSU?

21 A. I did.

22 Q. I would like you to take a look at Exhibits 27 and 28,
23 which are in front of you.

24 MR. HEIDT: Your Honor, we object to the extent she's
25 trying to testify about summaries of documents that she

1 received.

2 THE COURT: At this point, I'm not -- it is a general
3 objection. There is not a question before the witness
4 except to look at those documents. So the same rule
5 applies. I'll give the plaintiff an opportunity to
6 establish appropriate foundation, and you will have an
7 opportunity to object if the documents are tendered.

8 BY MR. McGUIRE:

9 Q. So, Ms. Marks, look first at Exhibit 27. Do you
10 recognize that?

11 A. Yes, of course.

12 Q. What is it --

13 A. Okay --

14 Q. -- without getting into the content?

15 A. This is a list of the components that are, according
16 to the FOIA request from CES, the components that are being used
17 today in this election and --

18 THE COURT: That is sufficient for identification.

19 BY MR. McGUIRE:

20 Q. And then who prepared Exhibit 27?

21 A. I prepared it with the help of the law firm. They
22 were making a slide. I prepared the content.

23 Q. And the statement at the top, "Components In Use Are
24 Not Certified As A System", is that your conclusion?

25 A. That is my conclusion just by comparing the two

1 documents, what they say is -- what they wrote was in use today
2 as well as what the last certification document was from the
3 Secretary of State.

4 Q. So you looked at one document they produced and looked
5 at a different document and this summarizes what they say?

6 A. Yes, the differences.

7 Q. And you prepared this?

8 A. Yes.

9 MR. McGUIRE: Your Honor, I would move to admit
10 Exhibit 27.

11 THE COURT: Any objection?

12 MR. HEIDT: Yes, your Honor.

13 THE COURT: Basis specifically, please?

14 MR. HEIDT: Basis is authentication.

15 THE COURT: Ms. Burwell?

16 MS. BURWELL: Your Honor, we would object to this
17 document as well on the basis that the underlying documents
18 that she claims she relied on haven't been provided to the
19 parties. There is no way to test whether or not her
20 compilation is an accurate compilation. So on that ground
21 we would object.

22 THE COURT: That's the objection. Well taken.

23 Mr. Bryan?

24 MR. BRYAN: Same, your Honor.

25 THE COURT: Mr. White?

1 MR. WHITE: Same.

2 THE COURT: Objection is sustained.

3 To that point, Mr. McGuire, certainly it might be
4 possible that the summary would be appropriate. But I
5 agree with Ms. Burwell. It is appropriate, also, for there
6 to be some introduction of the background data that
7 provides the basis for the summary that has been presented
8 in Plaintiff's 27.

9 MR. McGUIRE: Let me check and see if we have that.

10 [Brief pause.]

11 BY MR. McGUIRE:

12 Q. Ms. Marks, let's turn the question to your members'
13 interest in this election.

14 You testified that you have members -- Rocky Mountain
15 Foundation has members that are in each of the counties here in
16 CD-6?

17 A. Yes.

18 Q. What are the reasons for your members' concerns about
19 the security of the DRE system in this election?

20 A. Well, I would say all our members here in Georgia have
21 been aware for a very long time about the lack of verifiability
22 of the system and the fact there is no assurance that the voter
23 intent is accurately recorded.

24 There are some things that have happened just since the
25 first of March that have been quite alarming to our members

1 here, beginning with the -- apparently about March 1 the hacking
2 into the voter registration database at KSU. Then there was
3 apparently a theft of ExpressPoll books, pollbooks used in a
4 polling place, which are --

5 MR. HEIDT: Your Honor, I object. She has no personal
6 knowledge about any sort of theft.

7 THE COURT: Is there a response?

8 MR. McGUIRE: Yes. I mean, she's testifying about
9 what her members' concerns are and not to the truth of
10 whether or not this happened but what is motivating her
11 members.

12 THE COURT: But if it is not for the truth, for what
13 purpose are you offering the testimony?

14 MR. McGUIRE: To demonstrate that there is a fear that
15 burdens their fundamental constitutional right to vote and
16 a fear -- presumably we'll have to chance to cross-examine
17 some of their witnesses and demonstrate the vulnerability
18 with some of the documentation that we were having
19 difficulty getting in earlier, including this KSU issue.

20 But it is widely reported in the press that this stuff
21 happened and members --

22 THE COURT: The fact it is in the press certainly
23 doesn't make it true.

24 MR. McGUIRE: Of course, of course.

25 THE COURT: So is that the basis for your witness'

1 testimony?

2 MR. McGUIRE: Well, again, through this witness I'm
3 not trying to prove the truth of these things. I'm just
4 trying to prove what her members are aware of that cause
5 them to fear their right to vote may be lost.

6 THE COURT: I'll allow you a short leash.

7 BY MR. McGUIRE:

8 Q. Without elaborating, just tell us what your members
9 have said to you that they are concerned about.

10 A. Okay. They are concerned about what could have
11 happened with the theft of the pollbooks; the problems that
12 occurred on election night on April 18th when the cards were --
13 there was an improper card uploaded into the system and caused
14 system problems; that it is unclear whether that has been
15 resolved and why the system would have allowed improper cards to
16 be uploaded.

17 Also, the problems that occurred with the pollbook --

18 MR. HEIDT: Your Honor, we would voice a hearsay
19 objection again. She is now in double hearsay.

20 THE COURT: Objection is noted and overruled at this
21 point.

22 THE WITNESS: Also, the problems that occurred on
23 election day April 18th during the special election where
24 the system was causing voters to be sent to the wrong
25 polling places, and that information was confirmed today in

1 our documents that we received from Fulton County Election
2 Department that there were problems with the pollbooks that
3 caused people to be sent to the wrong polling locations.

4 So given the entire set of circumstances of problems
5 reported in the press, and that we had done research on to
6 have good reason to believe that those things were true, of
7 course their already grave concern about the safety of the
8 system was heightened because of all the security breaches
9 that had been reported and they were aware of. And then,
10 particularly, those that had read the Kennesaw report that
11 has been widely circulated, the walk-through incident --
12 the walk-through -- the incident report that was done to
13 assess KSU's security after the March 1st breach.

14 So that created far heightened concern about this
15 election and that something needed to be done about this
16 election.

17 BY MR. McGUIRE:

18 Q. And does Rocky Mountain Foundation's membership
19 fear -- how does Rocky Mountain Foundation's membership believe
20 these incidents are related to their right to vote?

21 A. Well, of course, the right to vote includes, by
22 implication, that the vote is going to be accurately recorded as
23 the voter intends. And our members have a general understanding
24 of how insecure the system is, as well as all of these reported
25 breaches to know that the system, even in layman's terms, cannot

1 be relied on as being secure. It must be presumed to be
2 insecure after all these various things have happened and have
3 been widely reported as well as the known vulnerabilities in the
4 system to begin with.

5 MR. HEIDT: Your Honor, we would object on the basis
6 she has no knowledge that the system is insecure.

7 THE COURT: The objection is overruled.

8 BY MR. McGUIRE:

9 Q. Rocky Mountain Foundation has asked this Court to
10 grant certain relief in this case, among which is requiring that
11 these machines not be used and instead the election be conducted
12 using hand-counted paper ballots; is that right?

13 A. That is correct.

14 Q. Why is that relief preferable to voting on this
15 system?

16 A. We wouldn't want to see anyone vote on this system
17 because of all the testimony the Court heard today as well as
18 all the academic research that has been done that shows these
19 systems are not reliable. But a paper ballot, as Dr. Felten
20 testified, is verifiable, it creates a secure environment, can
21 be recounted, and the voter --

22 MR. HEIDT: Again, your Honor, this witness has not
23 been entered as an expert and she can't testify to these
24 items.

25 THE COURT: Your objection is overruled. You may

1 complete your response.

2 THE WITNESS: Thank you, your Honor.

3 So the voter, of course, in seeing his or her ballot
4 as they are dropping it into the ballot box, they know
5 their ballot will be counted as cast because, in fact,
6 hand-counting paper ballots, that is observable by the
7 public under Georgia law.

8 And, also, we know that it would be far less costly
9 than using the machines and probably faster, actually, than
10 using the machines. But those are really kind of minor in
11 comparison to having the ability to recount this race and
12 to verify the voter knows that what they intended is what
13 got into the ballot box, which is not true here with these
14 types of machines.

15 THE COURT: Anything else?

16 MR. MC GUIRE: Let me ask my co-counsel if he has
17 anything.

18 [Brief pause.]

19 BY MR. MC GUIRE:

20 Q. I've handed you what is marked for identification as
21 Plaintiff's 10. Can you take a look at that and tell me when
22 you are ready.

23 [Brief pause.]

24 A. Okay. I have scanned through it.

25 Q. What are the pages in Exhibit 10?

1 A. These appear to be a package of pages that former
2 Secretary of State Karen Handel submitted as the prior
3 certifications, state certifications of the voting system. The
4 first one begins in 2002, May 23, 2002, under Secretary Cox.
5 And the final one -- and they are in reverse chronological
6 order, the most recent at the top going to the oldest at the
7 bottom.

8 And the most recent certification in this group is one that
9 is dated November 27, 2007, and signed by Secretary Handel.

10 Q. And is that November 27, 2007, certification, is that
11 the one that you used to prepare Plaintiff's 27?

12 A. Yes, it is. And that is in the middle column there,
13 "Secretary of State Voting System Certification, November 27th,
14 2007". And the elements that are listed in my chart are the
15 ones that were copied from the certification on the second page
16 of Exhibit 2.

17 THE COURT: The elements listed in which chart?

18 THE WITNESS: Plaintiff's Exhibit 27.

19 THE COURT: All of them or particular columns?

20 THE WITNESS: I believe that -- I believe that -- I'm
21 sorry, I misunderstood the question. The second to the
22 right column, "Secretary of State Voting Systems
23 Certification November 27, 2007", this is a list just in
24 tabular form of what is in this paragraph signed by
25 Secretary Handel.

1 BY MR. McGUIRE:

2 Q. Did the Secretary of State's office represent to you
3 that this was an incomplete set of documents answerable to your
4 open records request?

5 A. No, not at all. And we received this as well today
6 from KSU.

7 Q. Just to round out an earlier point. I would like to
8 ask you about Rocky Mountain Foundation a little bit more. What
9 is the current purpose, mission of Rocky Mountain Foundation?

10 A. While we have authority to do a broad set of public
11 interest work relating to constitutional rights and all sorts of
12 public interests, our primary purpose and focus in recent years
13 has been on voting rights issues, election transparency, voter
14 privacy.

15 And we have done a considerable amount of either litigation
16 or litigation funding for other non-profit parties or public
17 interest lawsuits for -- it's all been election-related to date.
18 Sometimes it is election transparency in trying to obtain
19 election records for the public oversight.

20 Q. And those purposes, are they approved by whatever
21 managing board you have?

22 A. Yes, they are. And they are filed every year on our
23 form 990 with the IRS.

24 Q. Does the most recent one that you have filed reflect
25 what you just testified to?

1 A. Yes.

2 MR. McGUIRE: Your Honor, I would move to admit
3 Plaintiff's 10 into evidence.

4 THE COURT: Any objection from the Secretary of State
5 on behalf of the Secretary of State?

6 MR. HEIDT: No, your Honor.

7 THE COURT: Ms. Burwell?

8 MS. BURWELL: No, your Honor.

9 THE COURT: Mr. Bryan?

10 MR. BRYAN: No.

11 THE COURT: Mr. White?

12 MR. WHITE: No, your Honor.

13 THE COURT: Plaintiff's 10 is admitted.

14 BY MR. McGUIRE:

15 Q. Ms. Marks, has anyone from the Secretary of State or
16 KSU told you or told anyone, to your knowledge, that there are
17 any other certifications of Georgia's voting system other than
18 what is shown in Exhibit 10?

19 THE COURT: Are you eliciting hearsay from the
20 witness?

21 BY MR. McGUIRE:

22 Q. Are you aware of any other certifications apart from
23 those that are listed in Exhibit 10 of Georgia's voting system
24 by the Secretary of State?

25 A. My open records request was complete and asked for all

1 voting system certification. This is all that we received,
2 other than one additional certification, but it was only of one
3 component. And that was signed by current Secretary Kemp, but
4 it was not a certification of a voting system. It was just a
5 voting system component. That would be the only other document
6 I received.

7 MR. MC GUIRE: We have no further questions on direct
8 of Ms. Marks.

9 THE COURT: On behalf of the Secretary of State?

10 MR. HEIDT: Yes, your Honor, briefly.

11 CROSS-EXAMINATION

12 BY MR. HEIDT:

13 Q. Good afternoon, Ms. Marks. I'm Josiah Heidt with the
14 Attorney General's Office.

15 Briefly, has Rocky Mountain's articles of incorporation
16 filed in Colorado ever been amended, to your knowledge?

17 A. I believe that at least once. And I have not been
18 there since its inception, so I would have a hard time telling
19 you the complete corporate history.

20 Q. To your knowledge, that amendment you are speaking of,
21 do you know what state it may have been filed in? Still in
22 Colorado?

23 A. In Colorado. It is a Colorado corporation.

24 Q. Is Garland Favorito a member of your organization?

25 A. Yes.

1 Q. How long have your members been aware of these issues
2 that you say have caused them to fear the security of the
3 upcoming election?

4 A. Well, we have some members who have been working on
5 this issue since 2002, since these machines were bought by the
6 state of Georgia and --

7 Q. So it is correct to say --

8 THE COURT: If you will allow her to complete her
9 answer. Go ahead.

10 THE WITNESS: We have members who have been concerned
11 for however many years this has been, 15 years. But as I
12 testified earlier, our members here in Georgia,
13 particularly those who are voting in the Sixth District
14 congressional race, have become increasingly alarmed by the
15 recent events and particularly some of the responses that
16 we got from Kennesaw State University when we asked about
17 system certification and found out there was none.

18 And so, of course, we have become recently alarmed at
19 the security breaches and that sort of thing. So while
20 they have been concerned for the long run, their concern
21 has been greatly heightened in recent weeks.

22 BY MR. HEIDT:

23 Q. Isn't it correct to say your members have had concerns
24 for at least a significant period prior to the filing of this
25 lawsuit on the eve of the election?

1 A. Absolutely. As I said, some of them have been working
2 at this longer than I even knew what a voting system was and
3 have been concerned about these DREs and have done things like
4 worked on legislation in other states to get rid of them and
5 have successfully done so. So, yes, many of them have filed
6 complaints in Georgia here as well, or some of them have.

7 Q. Thank you.

8 MR. HEIDT: Nothing further, your Honor.

9 THE COURT: Ms. Burwell?

10 MS. BURWELL: I have nothing, your Honor.

11 THE COURT: Mr. Bryan?

12 MR. BRYAN: Yes, your Honor, a few questions.

13 CROSS-EXAMINATION

14 BY MR. BRYAN:

15 Q. Good afternoon, Ms. Marks.

16 A. Good afternoon.

17 Q. My name is Bennett Bryan, and I represent Maxine
18 Daniels and the DeKalb County Board of Elections. I have a few
19 questions for you.

20 A. Okay.

21 Q. My questions relate to -- first relate to your
22 membership. How does someone become a member of Rocky Mountain
23 Foundation?

24 A. Just by letting us know they would like to be on our
25 mailing list and get information from us. Of course, we would

1 welcome their donations but it is not necessary.

2 Q. Yes, ma'am. Now, is there any formal procedure?

3 A. No. We are pretty informal about that. We don't have
4 any reason to have a very formal procedure other than someone
5 giving me a call, sending me an email, talking to a friend
6 saying, "Sign me up. We want to get your information".

7 Q. And if there is no -- if there is no formal process,
8 how are you confident that the information your members give you
9 is accurate?

10 A. I can't quite imagine that somebody will give me their
11 mailing address and ask me to put them on our mailing list and
12 give me the wrong address. I'm willing to take their word for
13 their address.

14 Q. Now, are you familiar with -- actually, if you would
15 please refer to Plaintiff's Exhibit 18. You should have that up
16 there.

17 A. Okay. I have it.

18 Q. What is Plaintiff's Exhibit 18?

19 A. It is a list of three of our members who plan to vote
20 in the Georgia Congressional District Six election.

21 Q. How do you know that they intend to vote?

22 A. They have told me.

23 Q. But you didn't do any sort of background check on any
24 of the names listed on here to determine whether or not the
25 information they provided is accurate, did you?

1 A. Well, let's see. I saw Donna Curling's address in an
2 affidavit that she filed, so I assume that it is correct. I
3 believe all of these people have given me their address. Have I
4 knocked on their door to find out who was going to answer the
5 door? No.

6 Q. They didn't tell you that they were registered voters,
7 did they?

8 A. Yes, they said they were electors and lived at these
9 addresses and were intending to vote in the CD-6 election.

10 Q. And you didn't verify any of that information, did
11 you?

12 A. No. I mean, I don't think I can verify whether or not
13 they intend to vote.

14 Q. Did you verify whether they were registered to vote in
15 the Sixth District?

16 A. No. I took their word for it.

17 Q. What if I told you that no one at the address 3379
18 Spring Harbor Drive, Doraville, Georgia, 30343, is registered to
19 vote?

20 A. I don't know the answer to that.

21 Q. What if I told you that no one with the name Xuan Hoa
22 Nguyen, spelled Z-u-a-n [sic] H-o-a N-g-u-y-e-n, is registered
23 to vote in DeKalb County or the Sixth District?

24 A. I don't have an answer because I did not verify it.

25 Q. So you don't know whether or not any of your members

1 are registered to vote in DeKalb County in the Sixth District?

2 A. Well, I believe that Donna Curling, who is a
3 plaintiff, I believe that would have been in her verified
4 complaint.

5 Q. Donna Curling? Please refer to Plaintiff's 18. Donna
6 Curling, do you see Donna Curling's name listed on there?

7 A. Yes.

8 Q. Do you see what her address is?

9 A. Uh-huh.

10 Q. Is that address in DeKalb County; do you know?

11 A. Oh, I'm sorry. I thought you were asking me about any
12 of the -- I apologize, I misunderstood your question. I thought
13 you were asking me about any of the people listed at the
14 addresses on the document.

15 Q. Right. And Donna Curling, is Donna Curling listed on
16 this document?

17 A. Yes.

18 Q. And is her address listed on that document within
19 DeKalb County?

20 A. No, it is indicated she lives in Fulton County.

21 Q. Okay, so she lives in Fulton County. Is anyone else
22 in your membership -- there are no other members that you have
23 listed either in the complaint or testified to that live in
24 DeKalb County and are eligible to vote in the Sixth District; is
25 that correct?

1 A. There are none that we have listed in the complaint,
2 and we would have to do some checking to see if there are others
3 that would be.

4 Q. I also would like to ask you a few questions related
5 to your opinion that paper ballots would be cheaper.

6 A. Yes.

7 Q. You did testify that a paper ballot would be cheaper;
8 right?

9 A. Yes, I did.

10 Q. Do you know how many ballots would need to be printed
11 for this election to be held entirely in paper ballots?

12 A. It is -- I'm assuming something less than 200,000.

13 Q. But you don't know, do you?

14 A. I certainly don't because I don't know what the
15 policies are of each county's superintendent on how much safety
16 stock they prefer to have and that sort of thing. I'm just
17 assuming that it would be under 200,000 ballots. It's just kind
18 of from the time I have been around elections that I would
19 assume it would be something like that.

20 Q. Do you know how many of those would be in DeKalb
21 County?

22 A. I don't know the numbers well enough to know.

23 Q. Do you know how many optical scanner machines would
24 need to be purchased to properly count the ballots in DeKalb
25 County?

1 A. I do know that.

2 Q. How many would that require?

3 A. Zero, because we're talking about hand-counting paper
4 ballots, not optical scan of paper ballots. So in order to
5 properly count the ballots, it would take no optical scan
6 machines.

7 Q. So did you hear the testimony of your expert witness
8 that specifically said that a paper ballot system also scans
9 through an optical scanner? Did you hear him say that?

10 MR. MC GUIRE: Objection, misstates testimony.

11 THE COURT: She can testify as to whether she heard
12 it.

13 BY MR. BRYAN:

14 Q. Did you hear him say that?

15 A. He was talking about one type of voting system and one
16 type of component of some voting systems. An optical scan
17 machine, just like you do have in DeKalb County, presumably for
18 the scanning and counting of absentee ballots. But that is not
19 what I was talking about in terms of hand-counting of paper
20 ballots.

21 Q. So you are requesting that this Court order DeKalb
22 County Board of Elections and Maxine Daniels to use solely paper
23 ballots?

24 A. Correct.

25 Q. You do not want her to use an optical scanner machine

1 that would verify the paper ballots, do you?

2 A. Well, optical scanning machines don't verify paper
3 ballots. Optical scanner machines read the markings on a paper
4 ballot and then interpret them, tabulate them, and report out
5 the results.

6 But they are part of the voting system, just like in
7 Exhibit 27. That is the paper ballot optical scan AccuVote-OS.
8 OS stands for optical scan. It's part of the voting system.
9 And what we're saying here in our testimony is that it is not
10 just the DRE that we're concerned about. We're concerned about
11 the entire system that is in use, the system that is not
12 certified.

13 So that is why we're asking for the relief. The only
14 verifiable method of determining the end result of this election
15 is hand-counting of paper ballots.

16 Q. Do you know how many employees and poll workers are
17 either employed or work for the DeKalb County Board of
18 Elections?

19 A. I do not.

20 Q. Do you know how long it would take to train the
21 employees and poll workers of DeKalb County in order to be able
22 to conduct an election with paper ballots?

23 A. I have a pretty good idea because I was part of a
24 similar situation in Colorado where it turns out that a system
25 was not a certified system and at the last minute the

1 jurisdiction had to switch to hand-counted paper ballots.

2 So I observed the training process and the hand-counting of
3 paper ballots. And it took almost no time because we learned in
4 grade school how to count ballots, particularly when we have
5 only one race on the ballot. And we went to the extent of
6 getting an expert, whose expert testimony has been filed,
7 hand-counting expert who says that it should take less than an
8 hour and a half.

9 That is consistent with my experience in watching numerous
10 hand-counting -- I have watched numerous hand-counted paper
11 ballot races, and it can be quite efficient. In fact, my
12 experience is it is far more efficient in a small race like this
13 than pulling out the machines, taking them down, securing them,
14 transporting the cards to be uploaded into the GEMS system. You
15 would actually get faster results and it wouldn't take much
16 training of people to know how to hand-tally a two-person race.

17 Q. So you don't know how much it would cost to train the
18 DeKalb County poll workers in conducting an entire election with
19 paper ballots?

20 A. I think common sense would tell us the number of hours
21 involved in teaching people how to hand-tally paper ballots
22 would be a fraction of the time that it would take to set up the
23 machines every day, bring them down every day, then go through
24 the tallying at the end of the day on election day with these
25 machines. It will be a fraction of these man-hours.

1 I think that you could probably train the people, from at
2 least my observation of having seen it done before, you can
3 probably train people within 20 to 30 minutes and train them and
4 then go back over the training a second time.

5 MR. BRYAN: Your Honor, I move to strike the
6 respondent's answer as off topic and outside the scope of
7 questioning.

8 THE COURT: Your motion is denied.

9 MR. BRYAN: No further questions.

10 THE COURT: Anything, Mr. White?

11 MR. WHITE: Yes, your Honor.

12 CROSS-EXAMINATION

13 BY MR. WHITE:

14 Q. Ms. Marks, my name is Daniel White and I represent
15 Janine Eveler and the Cobb County Board of Elections. I just
16 have a few questions for you to follow up on what you have
17 already been asked about.

18 Does the Rocky Mountain Foundation maintain a current list
19 of voters -- or members, I should say?

20 A. It is rather informal. It is -- it is on my computer
21 in a rather informal fashion, yes.

22 Q. And what does that mean? What is informal fashion?
23 In what format does it exist?

24 A. A collection of emails from people.

25 Q. Is there any compiled list aside from just whoever has

1 emailed you?

2 A. It is an incomplete list. I was doing a better job of
3 keeping up with that a few years ago, and I had a partial list a
4 few years ago. But now it's kind of been just sticking emails
5 into a folder.

6 Q. And how do your members find out about the Rocky
7 Mountain Foundation?

8 A. It has been a variety of ways. Generally, word of
9 mouth, people that we meet working on legislative activities and
10 hearings from the secretaries of state. And also we have had
11 some publicity about some of the work we do, so they hear about
12 that. Yesterday I was on a radio show in California so I got
13 some notes last night from people wanting to know about Rocky
14 Mountain Foundation.

15 Q. When people contact you, do they ask to be on your
16 mailing list or do they ask to be members generally?

17 A. It varies. It absolutely varies. Sometimes it will
18 be, "Hey, would you like to be considered a member?"

19 Q. I will ask you to refer to Plaintiff's Exhibit 18 --
20 well, let me withdraw that. I'll ask you some questions about
21 the documents you produced this morning.

22 MR. WHITE: Your Honor, may I approach?

23 THE COURT: You may.

24 BY MR. WHITE:

25 Q. Ms. Marks, if you will take a moment to flip through

1 those documents. Can you tell me what these documents are?

2 A. All right. It looks like the first one is perhaps the
3 original articles of incorporation, I'm assuming it is the
4 original, for Rocky Mountain Foundation filed in Colorado back
5 in 2008, I believe.

6 Q. All right.

7 A. And then --

8 Q. Does that go through page 5 -- or actually page --

9 A. I think it is page 4, looks like. And then a recent
10 certificate of good standing, that we are in good standing as a
11 Colorado corporation. And then we have bylaws that go through
12 page 23. The same document that is Plaintiff's Exhibit 18 is
13 page 24. And page 25 is the statement that we file as part of
14 our 990 we file with the IRS as a 501(c) (3) that's required
15 every year.

16 Q. And that says draft copy; is that --

17 A. Actually, this was what was submitted to the IRS. It
18 didn't have the draft word on it. Yesterday when I got the
19 subpoena request, the night before, very late, I didn't have
20 time to get my hands on an original from the CPA in Colorado.
21 But I wanted to try my best to comply with the intent, and that
22 was to show you the language that we did file with them. I just
23 happened to only have a draft of the tax return.

24 Q. Okay. Let me go back to the first document, the
25 articles of incorporation, and ask you about this briefly. This

1 is maintained in the regular course of your business; is that
2 correct?

3 A. Yes.

4 Q. And this is the articles of incorporation that forms
5 your foundation in what year?

6 A. This was 2008.

7 Q. And were you the organizer?

8 A. No, I was not. I was not involved in Rocky Mountain
9 Foundation until 2014, I believe. '13 or '14.

10 Q. Are you --

11 THE COURT: Mr. White, same as with Mr. McGuire.

12 First this document has not been marked for purposes of the
13 record.

14 Second, to the extent you expect to examine the
15 witness about it, you need to follow the rules or evidence.

16 MR. WHITE: Yes, your Honor, and I apologize for that.
17 I was trying to get some foundation and get it admitted and
18 I went straight into what the document said it itself.

19 Your Honor, I will mark the copy that she has, but
20 just pages 1 through 4 I would like to mark as Defendant's
21 Exhibit 1 and tender it to the Court as a document that was
22 provided by party plaintiff as a document that is kept in
23 the regular course of their business.

24 THE COURT: So we're on the same page, because my
25 pages were out of order, that would be page 1 through page

1 4?

2 MR. WHITE: Yes, your Honor.

3 THE COURT: Any objection, Mr. McGuire?

4 MR. MC GUIRE: No objection, your Honor.

5 THE COURT: Any of the defendants?

6 MR. HEIDT: No, your Honor.

7 MR. BRYAN: No, your Honor.

8 MR. WHITE: Let me label that so there is no
9 confusion.

10 THE COURT: Defendant's 1 is admitted.

11 BY MR. WHITE:

12 Q. If you will turn with me to the last page of that
13 Defendant's Exhibit 1, page 4. Can you just tell me what this
14 document says in terms of what the purpose of the Rocky Mountain
15 Foundation is?

16 A. Said purpose is organize exclusively for charitable,
17 religious, educational, and scientific purposes, including, for
18 such purposes, the making of distributions to organizations that
19 qualify as exempt organizations under section 501(c) (3) of the
20 Internal Revenue Code, or the corresponding section of any
21 future federal tax code.

22 Q. To your knowledge, is there anything else in the
23 articles of incorporation that speaks to the purpose of your
24 organization?

25 A. I would have to read it in detail. It has been a long

1 time since I have studied it.

2 Q. But if that was the only statement, does that contain
3 any indication that the purpose of your organization is germane
4 to the action you brought today, which is to say -- let me
5 rephrase that question.

6 You stated that the purpose of your organization, or one of
7 the purposes of your organization is to pursue litigation and
8 protect the rights of voters, I believe, including this action.
9 But I don't see anything in your articles of incorporation to
10 indicate that is one of your purposes.

11 A. Right. But it is also our purpose to have educational
12 and scientific efforts going on, and I think if you go back to
13 that 990 document that we filed with the IRS --

14 Q. I will ask you not to testify about that one.

15 A. Okay. All right. I would certainly say that our
16 litigation efforts support both educational and scientific
17 purposes. I can't say much about the religious, but that is why
18 we're here.

19 Q. Okay. I'm actually not going to deal with any of
20 these other documents you provided at this point, but I do want
21 to turn back to Plaintiff's 18. That was provided both as part
22 of this response but also to the Court this morning and has been
23 admitted to the Court. If you will look at Plaintiff's
24 Exhibit 18 for me.

25 A. Okay.

1 Q. Do you know Michael Opitz personally?

2 A. I don't think he and I ever met but we have known each
3 other for some years through cell phone and email conversations.

4 Q. How many years would you say?

5 A. Five years maybe.

6 Q. Do you know when did he first become a member, if you
7 will, of RMF, Rocky Mountain Foundation?

8 A. I don't remember. It was probably through some
9 telephone conversation some time ago because he does like to
10 keep up with what we're doing. I just --

11 Q. Do you know whether Mr. Opitz is registered to vote in
12 the Sixth District?

13 A. He told me that he was and he intends to vote.

14 Q. When did he tell you that?

15 A. I'm going to guess it was probably six, seven weeks
16 ago. Some time ago.

17 Q. Was this prior to the special election or after the
18 April 18th special election? In other words, was it for the
19 run-off election or for the primary election -- or the special
20 election?

21 A. That he told me he intended to vote?

22 Q. Uh-huh.

23 A. I don't remember precisely, but I'm assuming it was
24 prior to the April 18th election.

25 Q. So you haven't had any conversations with him since

1 the April 18th election in which he indicated he plans to vote?

2 A. Yes, certainly I have, that he intended to vote, yes,
3 I have. I thought you were asking when did he first tell me
4 that he intended to vote. Yes, I'm aware that he, as of a few
5 days ago, intended to vote. And I don't believe that he voted
6 yet as of that time.

7 Q. How did he tell you that he intended to vote? In what
8 format?

9 A. I believe that he might have told me in a text message
10 and by telephone.

11 Q. Would it surprise you to learn that Mr. Opitz ran in a
12 primary race for Congress in the Eleventh District in 2012?

13 A. I thought I knew something about him running for
14 Congress but I couldn't -- I don't think I knew him in 2012.

15 Q. Would you be surprised to learn that he participated
16 in that 2012 election on these very machines that you say he is
17 concerned as a member about?

18 A. I don't have any idea if he voted by DRE or by
19 absentee paper ballot. I wouldn't know that at all. But I
20 suspect that when he did vote, he voted by whatever system
21 Georgia required.

22 Q. Are you aware as to whether Georgia has a procedure to
23 challenge election results, contest election results?

24 A. I believe the procedure starts with a potential
25 canvassing that can be requested within three days -- excuse

1 me, before the election results are certified. I believe that
2 you can start with a canvassing, and you are permitted to do a
3 recount under certain conditions.

4 THE COURT: The question wasn't what is the process.

5 It was are you aware --

6 THE WITNESS: I'm sorry, I was trying to say --

7 THE COURT: -- of whether there is a process --

8 THE WITNESS: -- that I --

9 THE COURT: Ms. Marks, you have to follow the rules
10 because otherwise it makes my court reporter insane. We
11 can only speak one at a time. And when you hear my voice,
12 you stop speaking. Fair enough?

13 THE WITNESS: I apologize, your Honor.

14 THE COURT: The question was different than you were
15 answering.

16 If you will ask your question again, please, Counsel.

17 BY MR. WHITE:

18 Q. Ms. Marks, I was asking are you aware is there a
19 process in Georgia to contest election results?

20 A. Contest election results meaning to file a litigation
21 contesting election results, or just to -- are you asking me
22 about challenging?

23 Q. Is there a legal process to challenge election results
24 in Georgia?

25 A. Yes, there is.

1 Q. Would it surprise you Mr. Opitz, having run for
2 Congress in the Eleventh District and lost on these very
3 machines -- that were conducted on these very machines, would
4 not have challenged the method of taking those votes in 2012?

5 A. I don't know anything about that election, or how
6 close the election was, or whether or not at that time he fell
7 into the recount rules. His results, I mean, fell into the
8 recount parameters. I don't know very much about post-election
9 litigation in election contests in Georgia, so I wouldn't have
10 any way of answering your question whether or not to be
11 surprised.

12 Q. Okay, just one more follow-up. You provided
13 Mr. Opitz's address. I believe your testimony as to
14 Ms. Nguyen -- I'm not sure if it's Mr. or Ms. Nguyen in
15 DeKalb -- was that you didn't verify that they are voters,
16 registered voters in the Sixth District. Is that the same
17 answer for Mr. Opitz, that you did not verify --

18 A. I did not verify.

19 MR. WHITE: That is all for me, your Honor.

20 THE COURT: Mr. McGuire, any redirect?

21 MR. MC GUIRE: Just briefly.

22 REDIRECT EXAMINATION

23 BY MR. MC GUIRE:

24 Q. Ms. Marks, I handed you what is marked Exhibit 14. Do
25 you recognize that document?

1 A. Yes.

2 Q. What is that document?

3 A. This is a draft copy of the statement that was filed
4 as part of Rocky Mountain Foundation's form 990, and this is the
5 draft which ultimately went into the final.

6 Q. And you were already asked about this document?

7 A. Yes, I was.

8 MR. MC GUIRE: Your Honor, we move to admit Exhibit 14.

9 THE COURT: Any objection on behalf of the Secretary
10 of State?

11 MR. HEIDT: No, your Honor.

12 THE COURT: Fulton County?

13 MS. BURWELL: No, your Honor?

14 THE COURT: DeKalb?

15 MR. BRYAN: No, your Honor.

16 THE COURT: Cobb?

17 MR. WHITE: No, your Honor.

18 THE COURT: Plaintiff's 14 is admitted.

19 BY MR. MC GUIRE:

20 Q. Ms. Marks, aside from the leading questions of
21 counsel, do you have any reason to believe that the members
22 listed on Exhibit 18 do not live at the addresses shown on
23 Exhibit 18?

24 A. I have no reason to believe that.

25 Q. And, in fact, they told you they lived there?

1 THE COURT: Stop leading the witness, please.

2 MR. McGUIRE: Your Honor, at this point I don't have
3 any more questions for Ms. Marks on redirect.

4 THE COURT: Anything else from the Secretary of State?

5 MR. HEIDT: No, your Honor.

6 THE COURT: Fulton County?

7 MS. BURWELL: No, your Honor.

8 THE COURT: Mr. Bryan?

9 MR. BRYAN: No, your Honor.

10 THE COURT: Mr. White?

11 MR. WHITE: No, your Honor.

12 THE COURT: You may step down.

13 Any additional witnesses, Mr. McGuire?

14 MR. McGUIRE: I do have two affidavits that were filed
15 with our TRO motion that I would like to tender as
16 exhibits. The witnesses are not present in the courtroom
17 but they have submitted these sworn statements and we would
18 like them admitted in support of our motion as Exhibit 5
19 and 7.

20 THE COURT: Plaintiff's 5 is whose affidavit?

21 MR. McGUIRE: Exhibit 5 is the affidavit of Duncan
22 Buell. It's just his affidavit by itself.

23 And then Exhibit 7 is the affidavit of Virginia Martin
24 with an attachment, which is discussed in the affidavit.

25 THE COURT: Have you shared those with defense

1 counsel?

2 MR. McGUIRE: They have them from the motion filing
3 and I'm handing it to them right now.

4 THE COURT: Is there any objection on behalf of the
5 Secretary of State to plaintiff's admission of --

6 MR. HEIDT: Yes, your Honor --

7 THE COURT: May I finish?

8 MR. HEIDT: Sorry.

9 THE COURT: Plaintiff's admission of P-5 and P-7?

10 MR. HEIDT: Yes, your Honor. The witnesses are not
11 here for cross-examination.

12 THE COURT: Ms. Burwell?

13 MS. BURWELL: Same objection.

14 THE COURT: Mr. Bryan?

15 MR. BRYAN: Same, your Honor.

16 THE COURT: Mr. White?

17 MR. WHITE: Yes.

18 THE COURT: Mr. McGuire, what authority are you
19 relying on in support of these two affidavits that you are
20 tendering?

21 MR. McGUIRE: Your Honor, the affidavit of Ms. Martin,
22 she's a resident of New York and beyond the subpoena power
23 of the Court so we couldn't compel her attendance here
24 today.

25 THE COURT: There are different ways it could have

1 been done.

2 MR. McGUIRE: I guess we could do that. Mr. Buell,
3 Dr. Buell is attending to a family health issue.

4 THE COURT: To the defendants' point concerning
5 cross-examination, how do you get around that?

6 MR. McGUIRE: Well, the defendants have submitted
7 affidavits as well. And, you know, given the nature of
8 this emergency proceeding, I think the Court has
9 latitude -- has the power to admit this stuff and to
10 determine whether or not it is reliable testimony on the
11 basis of its content.

12 THE COURT: Part of the way I determine the
13 reliability of testimony, Mr. McGuire, is through
14 cross-examination. And so an affidavit presented from one
15 side without the ability for any testing of the contents of
16 that affidavit don't seem to be -- those things don't seem
17 to be properly before for the Court to consider matters
18 affecting the issues that have been raised.

19 So in light of that fact, the defendants' objections
20 to the admission of Plaintiff's 5 and 7 are sustained.

21 MR. McGUIRE: Thank you, your Honor.

22 THE COURT: Anything else?

23 MR. McGUIRE: May I just have one moment to find out?

24 [Brief pause.]

25 MR. KRUGMAN: Your Honor, I may have to throw myself

1 on the mercy of the Court to have a short break.

2 THE COURT: I was trying to get to a good breaking
3 point, which is why I was trying to determine if there are
4 any other witnesses.

5 MR. McGUIRE: We're still discussing that based on the
6 testimony that happened.

7 THE COURT: I would like you to wrap that up before we
8 break.

9 MR. McGUIRE: Before the break?

10 THE COURT: Yes.

11 [Brief pause.]

12 MR. McGUIRE: Your Honor, I know Ms. Marks was just
13 excused but we have one more exhibit we'd like to ask her
14 about. Can we recall her to finish her testimony?

15 THE COURT: Is that the only other matter that you
16 have?

17 MR. McGUIRE: Yes.

18 [Brief pause.]

19 MR. McGUIRE: Judge, along with Ms. Marks, we have a
20 short stream of questions for one other witness and then
21 we'll be done.

22 THE COURT: This is very brief.

23 FURTHER REDIRECT EXAMINATION

24 BY MR. McGUIRE:

25 Q. Ms. Marks, I handed you what's been marked as

1 Plaintiff's 16. Do you see that?

2 A. Yes.

3 Q. Do you recognize that document?

4 A. Yes.

5 Q. What is it?

6 A. It's the open records request exchanges I have had
7 with the attorney for Kennesaw State University and Center for
8 Election Systems. I requested a --

9 THE COURT: That is sufficient information.

10 Move along, Mr. McGuire.

11 MR. MC GUIRE: Your Honor, we move to admit Exhibit 16
12 into evidence.

13 THE COURT: Any objection on behalf of the Secretary
14 of State?

15 MR. HEIDT: No, your Honor.

16 THE COURT: Fulton County?

17 MS. BURWELL: No, your Honor.

18 THE COURT: DeKalb?

19 MR. BRYAN: No, your Honor.

20 THE COURT: Cobb?

21 MR. WHITE: No, your Honor.

22 THE COURT: Plaintiff's 16 is admitted.

23 BY MR. MC GUIRE:

24 Q. Ms. Marks, please turn to Exhibit 27. That is the
25 chart. That first column after "Components", what was the

1 source of that first column's information?

2 A. It was -- everything through the next to the last one
3 came from Mr. Milsteen's response. He was responding on behalf
4 of KSU Center for Election Systems. And I put what he said of
5 what the current voting components are into this column.

6 So that is a comparison of what he said that the voting
7 system components are compared to the ones that we got from the
8 Secretary of State's certificates.

9 Q. So is it fair to say that this column after
10 "Components" is derived from Exhibit 16?

11 A. Yes.

12 Q. And those next two columns were derived from the
13 certificates you received back from the Secretary of State?

14 A. Yes, that is correct.

15 MR. MCGUIRE: Your Honor, given that all the
16 underlying material behind Exhibit 27 is now in evidence,
17 we would renew our motion for Exhibit 27 to be admitted.

18 THE COURT: Any objection on behalf of the Secretary
19 of State to the admission of Plaintiff's 27?

20 MR. HEIDT: We have no objection to the extent this
21 chart represents a summary of the documents she received
22 but nothing further.

23 THE COURT: Ms. Burwell?

24 MS. BURWELL: No objection.

25 THE COURT: Mr. Bryan?

1 MR. BRYAN: Same objection as the Secretary of State.

2 THE COURT: They didn't lodge an objection.

3 MR. BRYAN: With the qualification that DeKalb would
4 like -- DeKalb would like the same qualification recognized
5 by the State, just the summary.

6 THE COURT: Mr. White?

7 MR. WHITE: No objection.

8 THE COURT: Plaintiff's 27 is admitted.

9 MR. McGUIRE: That is all we have for Ms. Marks on
10 redirect, your Honor.

11 THE COURT: Any questions on behalf of the Secretary
12 of State?

13 MR. HEIDT: No, your Honor.

14 THE COURT: Ms. Burwell?

15 MS. BURWELL: No, your Honor.

16 THE COURT: Mr. Bryan?

17 MR. BRYAN: No, your Honor.

18 THE COURT: Mr. White?

19 MR. WHITE: No, your Honor.

20 THE COURT: Your last witness?

21 MR. McGUIRE: Your Honor, we call Mr. Merle King.

22 DEPUTY BRYANT: Raise your right hand, sir.

23 MERLE KING,

24 having been first duly sworn, was examined

25 and testified as follows:

1 DEPUTY BRYANT: You may be seated. State and spell
2 your full name.

3 THE WITNESS: Merle, M-e-r-l-e, Steven, S-t-e-v-e-n,
4 King, K-i-n-g.

5 DIRECT EXAMINATION

6 BY MR. MC GUIRE:

7 Q. Mr. King, good afternoon. Can you look at the
8 exhibits in front of you and find the one that is marked
9 Exhibit 2?

10 A. I may need some help finding it.

11 MR. MC GUIRE: Your Honor, may I?

12 THE COURT: Yes.

13 MR. MC GUIRE: Your Honor, I would ask to be able to
14 lead this witness, who is an adverse witness.

15 THE COURT: You haven't established that he is
16 unwilling to testify at this point so your request at this
17 point is denied.

18 MR. MC GUIRE: Thank you.

19 BY MR. MC GUIRE:

20 Q. Mr. King, you have Exhibit 2 in front of you?

21 A. I do.

22 Q. Do you recognize Exhibit 2?

23 A. I do.

24 Q. What is it?

25 A. The front page is an email exchange between myself and

1 Stephen Gay, the director of information security at Kennesaw
2 State.

3 Q. And if you can turn to the third page, what is that?

4 A. I believe this is a report that Mr. Gay authored.

5 Q. You said you believe. Are you not certain?

6 A. I did not author it. And since it is attached to
7 Mr. Gay's email, I assume it was done by his office.

8 Q. And does Mr. Gay work for Kennesaw State University?

9 A. He does.

10 Q. And do you also work for Kennesaw State University?

11 A. I do.

12 Q. Did you receive this attachment to this email under
13 the Kennesaw State University email?

14 A. I received a draft of this report. Whether it is this
15 copy or not, I can't determine without comparing it to the
16 draft.

17 Q. Are you aware of an open records request that has been
18 submitted to Kennesaw State by Rocky Mountain Foundation and
19 Ms. Marks?

20 A. I am.

21 Q. And were you involved in the production of any records
22 responsive to that request?

23 A. Yes.

24 Q. Is this document you are looking at part of any
25 production that you are aware of that was provided to Ms. Marks?

1 A. It was.

2 MR. McGUIRE: Your Honor, we would renew our motion to
3 admit Exhibit 2.

4 THE COURT: Any objection on behalf of the Secretary
5 of State?

6 MR. HEIDT: Yes, your Honor. We would object that he
7 has not authenticated this as the final version of the
8 document.

9 THE COURT: Ms. Burwell?

10 MS. BURWELL: No objection.

11 THE COURT: Mr. Bryan?

12 MR. BRYAN: No, your Honor.

13 THE COURT: Mr. White?

14 MR. WHITE: Yes, your Honor. I also wanted to add the
15 copy of the exhibit we have contains a letter at the front
16 that he hasn't attempted to identify. So we want to
17 clarify for the record what you are seeking to admit here.

18 MR. McGUIRE: This was the document that we removed
19 pages from. Just for clarity, it is an email followed by
20 the KSU report.

21 THE COURT: It's a six-page document?

22 MR. McGUIRE: Six-page document, yes.

23 THE COURT: Any objection, Mr. White?

24 MR. WHITE: Yes, same objection as the State.

25 THE COURT: Plaintiff's 2 is admitted over the

1 defendants' objection.

2 MR. McGUIRE: Your Honor, we have nothing more for
3 Mr. King.

4 THE COURT: Anything on behalf of the Secretary of
5 State for this witness?

6 MR. HEIDT: Your Honor, since this was our only and
7 primary witness, we would ask that we reserve this witness
8 after we start our case in chief.

9 THE COURT: Ms. Burwell?

10 MS. BURWELL: Nothing.

11 THE COURT: Mr. Bryan?

12 MR. BRYAN: Nothing, your Honor.

13 THE COURT: Mr. White?

14 MR. WHITE: Nothing, your Honor.

15 THE COURT: Any other witnesses on behalf of your
16 clients, Mr. McGuire?

17 MR. McGUIRE: No further witnesses for our case in
18 chief, your Honor.

19 THE COURT: We're going to take a 20-minute break. We
20 will resume in 20 minutes with any witnesses that the
21 defendants intend to present. I would like to reserve
22 argument until the Court has heard from the witnesses.

23 [The proceedings stood in recess.]

24 THE COURT: All right, I'd like to move into the
25 defendants' presentation. I understand there is a desire

1 to present argument, but in light of where we are and in a
2 manner to proceed as efficiently as possible, at this point
3 I'm going to direct that any witness who will be called to
4 testify on behalf of any of the defendants are presented
5 first and then I will hear all the arguments.

6 I understand for the State typically arguments
7 relating to sovereign immunity and, quite honestly, motions
8 to dismiss are heard first. But given where we are, I want
9 to proceed differently.

10 So I'll take you in order. Secretary of State first.
11 Mr. Heidt and Ms. Correia, any witnesses you intend to
12 call?

13 MR. HEIDT: Yes, Secretary wishes to call Merle S.
14 King.

15 THE COURT: Mr. King, you are reminded that you are
16 still under oath, sir.

17 MERLE STEVEN KING,
18 having been previously sworn, was examined
19 and testified as follows:

20 DIRECT EXAMINATION

21 BY MR. HEIDT:

22 Q. Good afternoon, Mr. King. Could you please state your
23 full name and occupation for the Court.

24 A. Merle Steven King. I am a professor emeritus at
25 Kennesaw State University and executive director of the Center

1 for Election Systems.

2 Q. And how long have you been in that position?

3 A. I have been the executive director since 2002.

4 Q. Could you provide us with your educational background.

5 A. I have an undergraduate degree in biology and master's
6 degree in business administration and business information
7 systems.

8 Q. And could you please describe your prior experience
9 outside of the Center for Election Systems with voting or
10 election systems in general.

11 A. Beyond the work I do at the Center for Election
12 Systems, I work regularly with the U.S. Election Systems
13 Commission on the task force related to voting system standards
14 and on other issues related with election operations. I work
15 with other states on developing requirements for voting systems.

16 Q. And how many years of experience would you say that
17 you have in voting systems and voting administration?

18 A. 15. I started in 2002.

19 Q. And have you ever been qualified as an expert in a
20 court proceeding, specifically related to voting and voting
21 systems?

22 A. I have, in Pima County, Arizona.

23 MR. HEIDT: Your Honor, at this time Secretary of
24 State would like to present Mr. King as an expert witness
25 in voting system standards.

1 THE COURT: Any voir dire on behalf of the plaintiffs?

2 MR. McGUIRE: Yes, your Honor.

3 Good afternoon again, Mr. King. Mr. King, you are
4 being offered as an expert in voting system standards, I
5 believe. What is the voting system standard?

6 THE WITNESS: Well, the voting system standard is a
7 collection of conformance requirements approved by a
8 certifying body.

9 MR. McGUIRE: And what, in your mind, is a voting
10 system?

11 THE WITNESS: In my mind --

12 THE COURT: Counsel, this line of questioning should
13 relate to matters concerning voir dire, and so I want to be
14 sure that we don't stray too far afield from that.

15 THE WITNESS: So the U.S. Election Assistance
16 Commission through HAVA, Help America Vote Act, defines a
17 voting system as a device that can be used to define
18 ballots, capture voter intent, tabulate, and produce
19 reports and audits.

20 MR. McGUIRE: And have you worked with EAC in coming
21 up with any of these definitions?

22 THE WITNESS: We worked with the EAC in processing
23 over 6,000 public comments regarding the initial VVSG,
24 Voluntary Voting System Guidelines 1.0, and processed those
25 comments for evaluation by the EAC and produced the draft

1 document of the Voluntary Voting System Guidelines.

2 MR. McGUIRE: And before your interaction with the
3 EAC, did you work with the FCC on voting system standards?

4 THE WITNESS: I did not.

5 MR. McGUIRE: Have you worked at all with the NASED on
6 system standards?

7 THE WITNESS: Not on voting system standards.

8 MR. McGUIRE: Have you worked with them on anything
9 else?

10 THE WITNESS: Yes.

11 MR. McGUIRE: And what was that?

12 THE WITNESS: I worked on making presentations to the
13 body and consulting with their members.

14 MR. McGUIRE: How many years would you say you have
15 been involved in voting system standards?

16 THE WITNESS: 15.

17 MR. McGUIRE: I believe that's all.

18 THE COURT: Any objection?

19 MR. McGUIRE: No objection.

20 THE COURT: Anything on behalf of the remaining
21 defendants?

22 MS. BURWELL: No, your Honor.

23 MR. BRYAN: No, your Honor.

24 MR. WHITE: No, your Honor.

25 THE COURT: You may continue, Mr. Heidt.

1 BY MR. HEIDT:

2 Q. Mr. King, are you familiar with the various software
3 and hardware systems that the state of Georgia uses to
4 administer voting?

5 A. I am.

6 Q. Would you describe them for the Court.

7 A. At the core of the voting system is an election
8 management system called GEMS, G-E-M-S. We currently use
9 version 1.18.22G!. That system is used to prepare ballots or
10 prepare election databases which are used to prepare ballots but
11 also for final tabulation.

12 We utilize two DRE, direct-recording electronic touchscreen
13 systems, one of which is here in court, an R6 model. We also
14 use a TSx model. Both of those run Ballot Station 4.5.2!. We
15 use an optical scanner, which is used to scan in the absentee
16 and provisional ballots that run something called Firmware
17 1.94W. And that constitutes the core of the voting testimony.

18 In addition to that, the Secretary of State through the
19 years has expanded our definition of voting system to include
20 electronic pollbooks, which we used version 4000 and 5000
21 running software EasyRoster 2.1.2. And we also have added a
22 Honeywell barcode scanner that mates with the electronic
23 pollbook to check in voters at the polling location.

24 Surrounding that, there is a collection of media and
25 peripherals such as smart cards, memory cards, and encoders,

1 which are no longer used in elections but still certified.

2 Q. Thank you. From the voter's perspective, can you
3 describe the voting process in Georgia, their steps through the
4 process as they come to vote?

5 A. So there is three primary modes of voting in Georgia.
6 There is the mail-in absentee process -- which I'll hold off on
7 unless you have questions -- advanced voting, and election day
8 voting. And both advanced voting and election day voting are
9 done with DREs. So for the purpose of my explanation, if I can
10 start with election day voting.

11 When a voter comes into the polling location, they sign an
12 oath at a check-in table. That oath is used in combination with
13 an ID to validate that voter is eligible to vote in the
14 election.

15 Then that voter is moved to a table where they are checked
16 in on an electronic pollbook. The electronic pollbook will
17 confirm the voter's name and address but also is used to create
18 a voter access card, smart card that has key information on it
19 that is used to bring up the ballot style and the DRE to which
20 that voter is entitled to vote.

21 The voter will then take that voter access card to a DRE,
22 insert it into the DRE. It will bring up the appropriate ballot
23 style. The voter makes their choices, confirms their choices,
24 and then presses the "Cast Ballot" button on the DRE. It ejects
25 the voter access card. The voter then takes that card,

1 typically drops it in a basket.

2 And that is their experience as an election day voter.

3 Q. Thank you. And can you describe the process of the
4 vote from that point forward?

5 A. So this process goes on from the opening of polls to
6 the closing of polls. And when the polls close, the poll
7 manager and poll workers from those locations will use a
8 supervisor card to end the election on that DRE.

9 When the election is ending, it automatically produces a
10 summary tape that summarizes the votes cast in the races on that
11 DRE. So the poll workers are instructed to print out three
12 copies of those paper tapes, one of which remains in the
13 precinct. Typically it is taped to the door of the precinct so
14 the public can see it. And two of those paper tapes are then
15 wrapped around the voter -- I'm sorry, the memory card, PCMCIA
16 memory card, which has storage of cast vote records from the
17 DRE.

18 And those physical memory cards and paper tapes are then
19 transported to the county election office where they are
20 uploaded into the GEMS server and tabulated. As a part of that
21 process of tabulation, the county election office confirms that
22 the memory cards that are coming in are cards that are
23 associated with that election, associated with the specific
24 precinct, associated with the specific machine in the precinct
25 and verifies the vote totals at the GEMS tabulation server with

1 the vote totals that are on the paper tapes that are generated
2 at the precinct.

3 Q. Thank you.

4 MR. HEIDT: Your Honor, may I approach the witness?

5 THE COURT: You don't have to ask. You may.

6 BY MR. HEIDT:

7 Q. Mr. King, I'm handing you what plaintiffs previously
8 entered as their Exhibit 26. Do you recognize this document?

9 A. I have not seen this before.

10 Q. The plaintiffs presented this document as evidence
11 that at some point there is a transmission over phone lines
12 between collection centers and the GEMS central server
13 tabulation. Can you explain that process for the Court?

14 MR. McGUIRE: Objection, misstates the testimony.

15 THE COURT: I'll permit the witness to answer the
16 question if he is able.

17 THE WITNESS: The process that is depicted in this
18 illustration illustrates how Fulton County can transmit
19 unofficial results from collection centers in the county,
20 because of the size of the county and the traffic
21 congestion, into their central office rapidly on election
22 night.

23 I would note, though, that these memory cards, the
24 PCMCIA cards that are depicted here must still make the
25 journey to the tabulation server and must still be uploaded

1 into the tabulation server at the center. So this would
2 depict a pathway for unofficial results but not for the
3 results that are used for final canvass and certification.

4 BY MR. HEIDT:

5 Q. Would the official results of the vote ever be on a
6 machine that would be connected to the Internet?

7 A. They would not.

8 Q. Thank you. Mr. King, what, if any, security measures
9 are in place to protect the integrity of voting in Georgia?

10 A. Well, there is a variety of test protocols that are
11 applied, but probably the most important is to understand how
12 the voting system is layered with not only cybersecurity
13 encryption but there is also physical security that controls
14 access to the devices, controls the media, access to the media,
15 and procedural security which ensures completeness of results at
16 final tabulation.

17 So I think what is important is just as in the context of
18 looking at a component in the system, you have to evaluate the
19 end-to-end security of the system and understand that there are
20 verifications and reconciliation steps throughout the process.

21 Q. Thank you. Could you describe for the Court what, if
22 any, federal or state certifications Georgia's voting system
23 goes through and is currently certified under?

24 A. So the voting system that we currently use in Georgia
25 was initially purchased in 2002, which predates the creation of

1 the U.S. Election Assistance Commission and its standards, the
2 Voluntary Voting System Guidelines 1.0 and 1.1. So the
3 standards that were available at the time and were required by
4 Georgia were the NASED, slash, FEC, Federal Election Commission,
5 1990 standards. So our voting system was certified to the 1990
6 NASED/FEC standard.

7 Q. Any state-level certifications that the voting system
8 goes through?

9 A. The certification process in Georgia is the Secretary
10 of State can utilize a testing agent, which in our case is us,
11 the Center for Election Systems, and performs a variety of tests
12 on the system to ensure that the system complies with Georgia
13 statute, rule, and particularly any updates that have occurred
14 in recent legislation or rules that need to be reflected in the
15 voting system.

16 So the state certification process, we perform the testing
17 but, of course, only the Secretary of State has the authority to
18 certify.

19 Q. I'm handing you what the plaintiff previously entered
20 as their Exhibit 27. This is a summary chart, according to the
21 plaintiffs, of information that was provided to Ms. Marks in
22 response to an Open Records Act request.

23 Do the items in this chart look familiar to you?

24 A. Yes.

25 Q. Could you please describe the items in column one, to

1 the best of your knowledge, under "System Components In Use For
2 KSU Open Records Response June 1, 2017"?

3 A. The EMS, Election Management System, that we use is
4 1.18.22G!. The TSx Ballot Station is 4.5.2!. The ExpressPoll
5 4000, the version is 2.1.2, EasyRoster 2.1.2. Although that is
6 not stated, but it's the same in the 5000. The key card tool is
7 4.5 plus. The AccuVote firmware is correct.

8 But the EasyVote voter identification is not a part of the
9 certified system in Georgia.

10 Q. And could you describe the EasyVote system to the best
11 of your knowledge?

12 A. EasyVote system is a system that is used in some
13 number of counties, maybe 30 counties, to rapidly process
14 absentee ballot applications. And it uses the voter's -- scans
15 the front of the voter's driver's license to perform a lookup of
16 their voter registration information and then completes only the
17 application for the absentee ballot. And because it doesn't
18 touch a ballot, it was not considered to be a part of the voting
19 system.

20 Q. And can you describe any differences that you see
21 between the items listed in that first column that we just went
22 through and the second column titled "Secretary of State Voting
23 System Certification November 27, 2007"?

24 A. Yes. The primary difference is in the use of the
25 exclamation point. Whenever you make a change to a version of

1 the software, the convention is that you change the number of
2 the software to track versions in use.

3 In the case when Georgia updated the SSL, Secure Sockets
4 Layer certificate, which is used to encrypt information between
5 the DRE and the GEMS server, we needed a way to determine that
6 the version of 1.18.22G and 4.5.2 that we were being delivered
7 by the vendor had the updated SSL.

8 And so the exclamation point is an annotation that denotes
9 an updated SSL certificate.

10 Q. Would you describe what, if any, testing is performed
11 to ensure the security of the vote.

12 A. Well, there is a large number of tests that are
13 performed beginning with the federal certification test that
14 occurs prior to a voting system being shipped to the
15 jurisdiction for state certification. So in addition to the
16 federal certification and testing behind that, we perform
17 testing at the Center for Election Systems to ensure that the
18 voting system and its components as delivered conform to Georgia
19 statute and Georgia rule and our learned experience of anomalies
20 that we may have seen in the voting system over the years,
21 things like a printer buffer overflow.

22 Once the certified version of the system is decided upon by
23 the Secretary of State, when that system is either installed or
24 delivered to the county, each individual unit has to be
25 tested -- it is called an acceptance test -- to ensure that

1 individual device conforms to the certified model.

2 So in Georgia, every device that is in use has an
3 acceptance test decal, a certificate on the back of that device
4 that will indicate the year in which it last completed
5 acceptance testing. And given the 27,000 DREs we have in the
6 state, we tested all of them at least five times each.

7 So it is an ongoing process. Any time a voting system
8 component leaves the jurisdiction for repair or if it just falls
9 out of custody, it has to be retested before it can be reentered
10 into service.

11 In addition to the federal certification testing and state
12 certification testing and acceptance testing, there is also the
13 logic and accuracy testing that was mentioned earlier in
14 testimony today. And that is the pre-election test that the
15 jurisdiction does on each component of the voting system. And
16 it is very important to note that it is done with the ballot
17 that will be used in that election.

18 So it is not a hypothetical or theoretical election. It is
19 the actual election that will be conducted in that jurisdiction.
20 Those logic and accuracy tests can take weeks in a large county
21 and they are open to the public. The public is able to come in
22 and view.

23 So those are the four main types of testing that are done
24 routinely upon the voting system before its use.

25 Q. And just to clarify on the logic and accuracy testing,

1 what devices and hardware is that performed on?

2 A. It is performed on every device that is to be used in
3 the election, which would include the GEMS server, all the DREs
4 to be used, the optical scanners to be used, the paper ballots
5 that will run through the optical scan, and the ExpressPoll
6 units and the barcode scanners attached to the ExpressPoll
7 units.

8 Q. When did the state first begin to use DREs machine?

9 A. First DREs were used in 2002.

10 Q. How would a paper ballot requirement entered in the
11 middle of early voting for election work in the current ballot
12 and voting systems?

13 A. It is hard to imagine all of the intended and
14 unintended consequences of hand-counted paper ballots injected
15 into the middle of an election. One of the primary concerns
16 would be how would counties be able to deliver mandated
17 accessible voting to vision-impaired, low-vision, and other
18 voters that need assistance that is provided by DREs. That
19 would have to be understood.

20 THE COURT: How did we do it before we had DREs?

21 THE WITNESS: Before we had DREs, there was provisions
22 for assistance provided by the voter. But since HAVA, Help
23 America Vote Act, in 2002, in any federal election voters
24 are able to vote with full independence and privacy. You
25 have to be able to provide that with your voting system.

1 So in addition to that, we would need methods to
2 determine the appearance of the ballot. We have statutes
3 that define what goes into a ballot header, how races are
4 ordered, how candidates are ordered in the races. And it
5 would have to be evaluated how we would actually construct
6 the ballot, what would the ballot look like.

7 There are controls around ballots so that when you
8 produce the ballots, you know how many have been produced
9 and when you issue them, you have to know how many you
10 issued. And you have to know the ballot style that is
11 appropriate to that voter. And Georgia has a statute that
12 requires that any election return has to break down votes
13 by precinct.

14 And typically that information is encoded into the
15 optical scan ballots or into the electronic ballots that
16 let us easily determine to what precinct that voter belongs
17 to so that tabulated vote can be mapped back to that
18 precinct.

19 We don't have a method of integrating hand-counted
20 totals into our tabulation system where we would be
21 processing in absentee optical scan ballots, DREs' memory
22 cards. So we would have to identify some process to
23 integrate the hand-counting totals of ballots. We would
24 have to develop tally sheets. We would have to train
25 election workers who would have to train election

1 observers. We would have to purchase ballot boxes.

2 We would have to purchase privacy screens. The DREs
3 come with their own privacy screens. We would have to have
4 privacy screens to ensure the privacy of the voter.

5 And that is just kind of an initial cursory review of
6 the complexity that would have to be addressed in two
7 weeks.

8 BY MR. HEIDT:

9 Q. Have any voters for the June 20th, 2017, special
10 election run-off already voted on a DRE machine?

11 A. Yes.

12 Q. Are you aware of a single instance in which a DRE
13 machine has been tampered with in Georgia?

14 A. I am not.

15 Q. Are you aware of any instance in which a GEMS server,
16 ExpressPoll, or optical scan machine has been tampered with in
17 Georgia?

18 A. Tampered with, no. We are aware that four ExpressPoll
19 units were stolen and I believe ended up in a dumpster in
20 Clayton County out of Cobb County. But in terms of tampering,
21 altering, and returning to service, no.

22 Q. Is there any risk those stolen ExpressPoll machines
23 would make it back into service?

24 A. No.

25 Q. And, finally, are you aware -- and I may have touched

1 on this point a bit -- but are you aware of voting hardware
2 systems that are ever connected to the Internet in Georgia?

3 A. They are not.

4 MR. HEIDT: Your Honor, at this time I would like to
5 move to enter Mr. King's affidavit into evidence as
6 Defendant's Exhibit 1.

7 THE COURT: He testified. Why is it necessary,
8 Counsel?

9 MR. HEIDT: Just as a courtesy, but if you don't need
10 it, okay. At this time, I have nothing further, unless, of
11 course, Mr. King is needed to testify at some later
12 discovery matter.

13 THE COURT: Do you have anything, Mr. McGuire?

14 MR. MC GUIRE: Yes, your Honor.

15 CROSS-EXAMINATION

16 BY MR. MC GUIRE:

17 Q. Mr. King, hello again. You would agree, would you
18 not, that it is illegal to operate a voting system in Georgia
19 that has not been certified for use by the Secretary of State?

20 A. That is correct.

21 Q. And would you also agree that any part of the voting
22 system has to be certified in order for it to be used in the
23 system?

24 A. In the context that the Secretary of State defines
25 what is the voting system, yes.

1 Q. And does the Secretary of State define the voting
2 system to include anything -- any component that is integrated
3 with the process of voting?

4 A. I can't speak to how the Secretary of State defines
5 it.

6 Q. Well, you are the director of CES, are you not?

7 A. I am.

8 Q. And you are well aware of the Secretary's requirements
9 for voting systems, are you not?

10 A. I am.

11 Q. Doesn't the Secretary of State's rule governing the
12 certification of voting systems provide that any modification to
13 a voting system requires certification unless it has no effect
14 on the flow, count, and accuracy?

15 A. Could you give me the rule to which you are referring
16 to?

17 Q. We'll get the citation for you. Would you agree any
18 modification of a voting system requires the Secretary to
19 approve that system as modified can be used safely and
20 accurately?

21 A. That is the discretion of the Secretary, yes.

22 Q. So it is your testimony that the Secretary may in his
23 discretion not certify a system and it can then be used legally?

24 A. That is what I'm asserting.

25 Q. So if a component of the voting system, like the GEMS,

1 the election management system, GEMS, is modified, that would
2 happen by -- your office would do that or who would do that?

3 A. The vendor would do that.

4 Q. And you testified that the version in Georgia for GEMS
5 is 1.1822G!?

6 A. Correct.

7 Q. Now, isn't adding a different SSL certificate a
8 modification of the voting system?

9 A. It is not.

10 Q. Why is it not?

11 A. The SSL certificate is standard maintenance in
12 technology. Your workstation, my workstation updates their SSL
13 certificates frequently.

14 Q. So in your view, changing something like the SSL
15 certificate would not amount to a change in the system; is that
16 right?

17 A. It would be considered routine maintenance of that
18 system.

19 Q. Okay. What about attaching an additional item, like
20 the EasyVote? Would that be a change in the system?

21 A. That would be an enormous change in the system since
22 that is not possible to do.

23 Q. But the EasyVote system is part of the process though;
24 right?

25 A. It is not.

1 Q. Is it -- what is it used for?

2 A. As I explained earlier, it's an absentee ballot
3 application system that some counties have selected. But it is
4 not a part of the voting system.

5 Q. So it is used in elections?

6 A. It may be used in elections in some counties.

7 Q. And the Secretary of State hasn't certified the
8 EasyVote for Atlanta, Georgia; right?

9 A. That is correct.

10 Q. What about having a different version of the key card
11 tool? Would that be a modification?

12 A. The booting of the key card tool would be an update to
13 the system. The component of -- I'm sorry. I don't want to
14 anticipate your question. Please continue.

15 Q. I'm looking at Exhibit 27, which I think that you have
16 in front of you. Next to key card tool it says the version in
17 use is 4.5, and I think that you said it is 4.5 plus?

18 A. This is not correct. The key card tool -- I would
19 have to check the version. The security key is 4.5 plus. So
20 there is a comparison of -- there is a conflation of the key
21 card tool and the security key for the ExpressPoll unit.

22 Q. So is it your testimony that the key card tool version
23 is 1.01?

24 A. It is in my affidavit. I would have to double check.

25 Q. So you are saying as you sit here today you don't know

1 what the version is of the key card tool without looking at your
2 affidavit?

3 A. I would want to make sure I'm citing it correctly.

4 MR. McGUIRE: May I approach to have him check it?

5 THE WITNESS: This is not the affidavit that cites the
6 components of the system.

7 BY MR. McGUIRE:

8 Q. Exhibit 24 is an affidavit by you; correct? You are
9 saying it is not the one you are referring to?

10 A. Correct.

11 Q. So are you aware that in response to subpoenas that
12 were served today, you produced a response which indicates that
13 the key card version is 4.5 plus, security key 4.5 plus?

14 A. Security key is 4.5 plus.

15 Q. So what would be the closest version to what the
16 Secretary certified here as 1.01? What do you think this is
17 referring to?

18 A. I think that is referring to the key card writer.

19 Q. So in your response, are you aware that you said the
20 card writer version is 1.14?

21 A. I believe that is correct.

22 Q. That is different than 1.01, wouldn't you agree?

23 A. Definitely.

24 Q. Does each change get its own new number?

25 A. Each version gets its own number, yes.

1 Q. So then is it right to conclude that the current
2 version of the card writer, which is 1.14, compared with version
3 1.04, how many versions apart is that?

4 A. I don't know.

5 Q. So earlier I asked you about the Secretary of State's
6 certification and you asked me for a rule citation. If I tell
7 you a citation to rule 590, does that mean something to you?

8 A. It does.

9 Q. So you are familiar with rule 590?

10 A. I am.

11 Q. Rule 590 requires that any change to the system
12 configuration such as changes to a new version of the card
13 writer requires new certification by the Secretary?

14 A. There is also a provision in that rule that the
15 Secretary of State is the sole determinant on whether a
16 component is tested.

17 Q. So is it your interpretation of the rules then that as
18 long as the Secretary decides he doesn't need to test something,
19 changes can be done without any recertification?

20 A. No.

21 Q. Okay. Earlier you mentioned Pima County. What was
22 your involvement in Pima County again?

23 A. In Pima County I was asked to give testimony regarding
24 the security of a GEMS database.

25 Q. And do you recall the substance of your testimony?

1 A. No.

2 Q. Would it surprise you to learn that you testified that
3 Georgia's GEMS database could be corrupted when you were
4 speaking in that Pima County case?

5 A. I would have to know the context of what I meant by
6 corrupted.

7 Q. It is possible that is something you would have
8 testified to?

9 A. It is possible.

10 Q. Are you aware that when Ms. Marks submitted a FOIA
11 request to KSU for documentation that supported your claims that
12 the current system is federal and state certified, that KSU
13 responded that there were no responsive documents?

14 A. I am.

15 Q. Now, you talked about a couple different security
16 measures, four security measures you mentioned. I had delivery
17 testing at KSU. That is one; right? Is that one of the things
18 that you --

19 A. No.

20 Q. What is the delivery testing? Where does that happen?

21 A. I'm not sure what you mean by delivery testing.

22 Q. Okay. So when a DRE is delivered, isn't there
23 testing?

24 A. When a DRE or any voting system component is delivered
25 to a county, there is acceptance testing.

1 Q. So that is done locally but in conjunction with your
2 office?

3 A. It is done by our staff either in our facility, which
4 the equipment is delivered to us. We test it and reseal it,
5 transfer it to the county. Or it is done in the county itself.

6 Q. And that is just -- that is upon delivery, basically,
7 to the county? That is not done before every election. That is
8 a one-time testing; right?

9 A. It is not a one-time testing. It is done every time
10 the unit leaves the custody of the jurisdiction, which could be
11 for repair. We've had to do acceptance tests where there have
12 been fires and buildings were evacuated, or equipment has been
13 left in a precinct, that type of thing.

14 So it is done whenever there is new or repaired equipment,
15 or whenever the equipment falls out of custody.

16 Q. And you also mentioned logic and accuracy pre-election
17 testing. That is done when?

18 A. That is done prior to each election by the county.

19 Q. And did you hear the testimony of any of the witnesses
20 before you were called to the stand?

21 A. I did.

22 Q. Did you hear Mr. Felten testify that that testing is
23 done internally?

24 A. I did.

25 Q. Do you disagree with that?

1 A. I disagree with the conclusion that that is the only
2 component of logic and accuracy testing, is running the DRE
3 logic and accuracy mode.

4 Q. Isn't it true if the computer, or if the DRE is in a
5 certain mode when the testing is run, that it's possible that
6 the system could work differently when it is in a different
7 mode?

8 A. If you are asking me with computers that anything is
9 possible, then, yes, anything is possible.

10 Q. And were you aware of Mr. Felten's work with DRE, the
11 thing he testified about to Congress where a DRE virus could
12 change the software?

13 A. I am.

14 Q. How would you be aware if something like that affected
15 a machine in Georgia's election system?

16 A. Can you describe the virus? Part of any kind of
17 forensic is you have to look at the signature of the virus to
18 understand what the vector is and what the manifestation is.

19 Q. You don't disagree with Mr. Felten and Mr. DeMillo
20 that an adversary seeking to corrupt an election system would
21 probably hide their tracks; right?

22 A. Seems to be a reasonable conclusion, yes.

23 Q. And you would agree that for a sophisticated adversary
24 you might not be able to detect if the system had been
25 compromised?

1 A. Theoretically possible, yes.

2 Q. You spoke about the consequences of hand-counting
3 ballots as part of the election. Georgia law provides for paper
4 ballots to be used in the election in the event the machine is
5 unusable; right?

6 A. Yes. The statute refers specifically to lever
7 machines, yes.

8 Q. Well, the statute I'm thinking of is 21.2.281. Do you
9 know that citation?

10 A. I do.

11 Q. Are you saying that refers to lever machines?

12 A. Does that statute refer to -- is it 334?

13 Q. First, 334, yes.

14 A. Which refers to lever machines.

15 Q. So your interpretation of that is it only refers to
16 lever machines, not to voting machines generally?

17 A. I have not analyzed that statute for all of its
18 permutations with our voting system. That would not be my
19 decision.

20 Q. Whose decision would it be?

21 A. It wouldn't be mine.

22 Q. You don't disagree that Georgia law provides for paper
23 ballots to be used in certain circumstances?

24 A. I agree.

25 Q. So if in a precinct place there is a plumbing problem

1 upstairs overnight and all the DREs got ruined, you would agree
2 that that precinct could use paper ballots in that election?

3 A. Well, it is not my decision.

4 MR. HEIDT: Your Honor --

5 BY MR. McGUIRE:

6 Q. I understand it is not your decision, but is it your
7 understanding of Georgia law that --

8 MR. HEIDT: Your Honor, he is asking for a legal
9 conclusion.

10 THE COURT: I'll permit the witness to answer the
11 question if he is able. He already testified about other
12 matters affecting Georgia law.

13 BY MR. McGUIRE:

14 Q. So it is contemplated by Georgia law, as far as you
15 know, for paper ballots to be used in the middle of an election
16 where other votes may be cast on a DRE; is that right?

17 A. That is not my interpretation of the statute.

18 Q. Isn't that what would happen if one precinct got
19 rained on and DREs were rendered unusable?

20 A. I can envision several scenarios but most likely it
21 would be that paper optical scan ballots would be provided in
22 that precinct, not hand-counted paper ballots.

23 Q. So you agree paper ballots could be used in that
24 situation?

25 A. There is a nuance definition of paper ballots.

1 Optical scan paper ballots would be the preferred remedy from an
2 integration of the technology. Hand-counted paper ballots would
3 not be.

4 Q. Why would an optical scan be a preferred method?

5 A. Because we have already validated the ballot design.

6 The optical scan paper ballots are derived from the same
7 definition as DRE ballots. And when we scan those ballots, we
8 know that they will scan back into that GEMS system and be
9 appropriated to the appropriate precincts as well as the
10 tabulation.

11 Q. So it would still involve the use of the GEMS server
12 component of this DRE system?

13 A. That is correct.

14 Q. But if you were to count them by hand, it wouldn't
15 involve any of the software components; right?

16 A. Assuming in your scenario where you describe one
17 precinct, the precinct's votes would still have to be integrated
18 into the vote totals for the county, of which the remainder
19 would be on the GEMS server by tabulation.

20 Q. So that situation, that might be inconvenient but it
21 could be done?

22 A. There is no rule that I know of that would permit that
23 to be done.

24 Q. And, in fact, as you already testified, Georgia
25 statute contemplates the use of paper ballots if the DREs --

1 THE COURT: He already testified about it. We don't
2 need to revisit it.

3 BY MR. McGuire:

4 Q. Would you agree with me that if you knew DRE machines
5 had been compromised, it would be impracticable to use them?

6 A. I would have to know more details before I could agree
7 with that statement because of the ability to remedy the DREs by
8 reloading their software and retesting them.

9 Q. Would you agree with me that there is no way to
10 recount a DRE touchscreen election that gives you any better
11 sense of what the voters' intent was than the first time you run
12 it?

13 A. It is a compound question. Would I agree there is no
14 way to recount? There is a way to recount, and we do it all the
15 time when recounts are called for in the state.

16 Would I agree that voter intent changes on a DRE? It does
17 not but it should not. That is a part of the design goal of a
18 DRE, is that it accurately interprets voter intent and removes
19 that ambiguity from the process.

20 Q. And it would not change because it is going to report
21 the same numbers that it reported the first time; right?

22 A. It should, yes.

23 Q. If those numbers were wrong the first time, they will
24 be wrong the second time?

25 A. Well, there is a presumption there that there is

1 incorrectness the first time. The DREs are designed to be
2 consistent so that the computer record, the cast vote record on
3 the unit is reliably downloaded each time by design.

4 Q. And with a paper ballot, you can scrutinize the ballot
5 to find out if the voter intent maybe was not correctly
6 recorded; right?

7 A. No. Georgia does not permit for interpretation of
8 voter intent not to withstand that.

9 Q. You can look at it and see if the optical scan machine
10 is not functioning properly; right?

11 A. It can be a part of the evidence of that, yes.

12 Q. But you don't have any similar kind of evidence that
13 you could use with the DRE system to determine if it is properly
14 interpreting voter intent, do you?

15 A. Yes.

16 Q. What are you referring to?

17 A. The testing that we do on the systems. We monitor --
18 and we don't test in L & A mode so this is in a testing mode.
19 We monitor the key strokes that occur on the screen, videotape
20 them, monitor the output of the system, and we validate that the
21 voter intent was captured as intended and recorded as cast.

22 Q. You have all these ways to audit whether it is
23 recording properly in test mode, but you don't have any way of
24 seeing if it is working properly in election mode, do you?

25 A. In realtime, no.

1 Q. During an election that lasts over the course of
2 multiple days, these devices are outside of your office's
3 custody and control, aren't they?

4 A. Yes. In fact, our office has no DREs in our custody.

5 Q. Okay. Do you provide on-sight oversight to make sure
6 that they are kept in a secure manner and that no one accesses
7 them improperly?

8 A. We make periodic visits to counties to inspect the
9 storage of DREs and GEMS servers.

10 Q. I would like to ask you about the stolen pollbooks
11 issue. Where did that happen?

12 A. I will do my best, but that is a Cobb County equipment
13 issue so I will only be speaking hearsay from reports that I
14 have read, if that is sufficient.

15 Q. So isn't it true that someone who knows what they are
16 doing who has access to pollbooks can create voter cards based
17 on what they learned from the pollbooks?

18 A. Usable voter access cards?

19 Q. Right.

20 A. In the case of the four units that were stolen in Cobb
21 County, we deactivated their ability to create voter access
22 cards that would be usable in the election. So that is a
23 capability that we have in terms of redefining the ballots on
24 the DRE that will not accept voter access cards created by
25 unauthorized units.

1 Q. So each unit has its own identity that you can
2 address?

3 A. That has made it to the GEMS system, to the DREs that
4 will be deployed in that precinct. So the pollbooks that are
5 employed in the precinct are mated to the DREs and the ballot
6 styles that will be available in that precinct.

7 Q. And do the SSL certificates on Georgia's system use a
8 SHA-1 hash function?

9 A. I can't speak to that.

10 Q. You don't know?

11 A. I would have to look at the documentation on that.

12 Q. What do you know about what happened in Fulton County
13 on April 18th with the pollbooks?

14 A. I know that it was reported that voters were unable to
15 have proper voter access cards created from the pollbooks. My
16 understanding was that Fulton County was running two elections
17 in the same polling location. In order to keep those elections
18 managed separately, there were pollbook units assigned to one
19 election which would only create voter access cards that were
20 valid for that election, and electronic pollbooks that were
21 assigned to another queue that would only create access cards
22 valid to that election.

23 And the voters were, once they got their voter access card,
24 my understanding is they went to machines in a different queue
25 that did not have that ballot style available to them.

1 But I would say that is a design feature. The pollbooks
2 are doing exactly what they should do, which is only permitting
3 the eligible voter to vote in the election to which they are
4 qualified.

5 Q. And about this tabulation issue that happened on
6 election night in Fulton County, in Roswell. You are familiar
7 with that?

8 A. I am familiar but not with the details.

9 Q. Do you know whether there was any error message from
10 the GEMS server when that bad data was uploaded into it?

11 A. I don't know.

12 Q. This isn't supposed to accept data from another
13 election, is it?

14 A. Ultimately, no. And in this case of GEMS, because
15 there are several processing steps, ultimately an invalid
16 uploaded memory card will be detected but not always detected at
17 its injection into the system.

18 Q. In fact, in this case it was detected when it was
19 exported into the voter reporting system; right?

20 A. That is correct.

21 Q. And that is not part of the voting system, is it?

22 A. The export is a part of the voting system. The upload
23 to the Election Night Reporting System is not.

24 Q. And the Election Night Reporting System is the piece
25 that actually threw the error; right?

1 A. I can't say. I was not present. I didn't see the
2 errors.

3 Q. So just to clarify on the April 18th polling issue, is
4 it not your understanding that the problem was that voters were
5 being sent to the wrong polling place?

6 A. That is not my understanding.

7 MR. McGUIRE: Nothing further on cross, your Honor.

8 THE COURT: Anything else?

9 MR. HEIDT: Just a couple questions, your Honor.

10 REDIRECT EXAMINATION

11 BY MR. HEIDT:

12 Q. Mr. King, you testified earlier that the voting system
13 was federally certified. And you also responded to a subpoena
14 that you possess no documentation on this certification. Can
15 you describe that difference?

16 A. Yes. Prior to 2008, the state testing agent was
17 Dr. Brent Williams, and he managed all the correspondence
18 between NASED/FEC and the State of Georgia. And we at the
19 Center, we were never in receipt of the certification letters
20 from NASED.

21 Q. Could you also describe for the Court GEMS verify.

22 A. So every computer program or collection of programs
23 can be processed in a way to produce a distinctive digital
24 signature called a hash code. It's a non-ambiguous code that is
25 a reliable way to determine whether a version of software is

1 authentic in terms of it being non-modified.

2 So beginning in about 2003 or '04, perhaps, we began
3 maintaining a hash code signature for the GEMS system that we
4 have installed. And as a part of our testing of the GEMS server
5 in each installation, we verified that the files stored in the
6 GEMS server match the hash code of the certified file. And it
7 is a way of detecting whether there has been any modifications
8 to the GEMS program or any inadvertent corruption of the
9 program.

10 Q. Thank you.

11 MR. HEIDT: Nothing further, your Honor.

12 THE COURT: Mr. McGuire?

13 MR. McGUIRE: We have nothing else, your Honor.

14 THE COURT: Do any of the other defendants have
15 questions for this witness before he's excused?

16 MS. BURWELL: No, your Honor.

17 MR. WHITE: No, your Honor.

18 MR. BRYAN: No, your Honor.

19 THE COURT: Any other witnesses on behalf of the
20 Secretary of State?

21 MR. HEIDT: No, your Honor.

22 THE COURT: Ms. Burwell, on behalf of Fulton County,
23 please?

24 MS. BURWELL: Richard Barron.

25 DEPUTY BRYANT: Raise your right hand.

1 RICHARD BARRON,

2 having been first duly sworn, was examined
3 and testified as follows:

4 DEPUTY BRYANT: Have a seat. State and spell your
5 full name.

6 THE WITNESS: I'm Richard Lee Barron.

7 THE COURT: Spell your last name, please.

8 THE WITNESS: B-a-r-r-o-n.

9 DIRECT EXAMINATION

10 BY MS. BURWELL:

11 Q. What is your occupation?

12 A. Director of Registration and Election for Fulton
13 County.

14 Q. Can you tell the Court about your background and
15 education?

16 A. I have an undergraduate degree from University of
17 Oregon in political science; a graduate degree -- or master's
18 degree from Antioch University in classical civilizations; and I
19 have a graduate certificate in mediation and arbitration from
20 Willamette University Center for dispute resolution.

21 Q. Can you tell the Court about your background with
22 elections?

23 A. I started in elections in 1999 in Travis County,
24 Texas. I have also worked for Sequoia Voting Systems; Hart
25 InterCivic; Williams County, Texas, as the elections

1 administrator; and then I became the director here in Fulton
2 County in 2013.

3 Q. What are your duties?

4 A. I oversee all of the federal, state, and local
5 elections for Fulton County. It includes overseeing the staff
6 and administering all of those elections, recruiting the poll
7 workers, being the main contact for the media, making sure the
8 poll workers are trained, all of the early voting is executed,
9 that we get everything deployed for election day, all the
10 post-election activities as well as tabulation on election
11 night.

12 Q. And do you have to follow state law with respect to
13 your overseeing of elections in Fulton County?

14 A. Yes.

15 Q. Why do you use the DRE-based voting system?

16 A. Because that is state law.

17 Q. So the state law requires it?

18 A. Yes.

19 Q. Has Fulton County ever had any software issues with
20 its DRE machines?

21 A. Not since I have been there, no.

22 Q. Since you have been there, are you aware of any issue
23 with viruses?

24 A. No.

25 Q. What about any attacks on Fulton County DRE machines?

1 A. No.

2 Q. Do you test the machines?

3 A. Yes. We do logic and accuracy testing before each
4 election.

5 Q. Have you undertaken any of that testing with respect
6 to the current election?

7 A. Yes.

8 Q. When did you start that testing?

9 A. I would have to look at my affidavit but I believe the
10 logic and accuracy testing started sometime after -- well, it
11 would have started before May 6th because that was the deadline
12 we had to get overseas ballots into the mail.

13 Q. So the DRE machines, is each machine a separate
14 machine?

15 A. Yes.

16 Q. Are the machines connected to each other in any
17 manner?

18 A. Only by electricity.

19 Q. Are they connected to the Internet at all?

20 A. No.

21 Q. I wanted to ask you about your actual machines. Are
22 your machines housed at Kennesaw State?

23 A. No. They are in our warehouse in Fulton County on
24 English Street.

25 Q. And the cards that are used in the machines, where are

1 those housed?

2 A. Those are all at 1365 English Street.

3 Q. The poll boxes, are those housed at Kennesaw State?

4 A. All the ExpressPolls are at our warehouse on English
5 Street as well.

6 Q. Now, are poll boxes DRE machines?

7 A. Are you talking about the ExpressPolls --

8 Q. Yes.

9 A. -- that were referred to earlier, the ones that were
10 stolen? Those are ExpressPolls, yes. Those are the pollbooks
11 that we use for voters to check in on election day.

12 Q. So that is something that -- a poll box is something
13 that is used for the checking in of an individual?

14 A. Correct.

15 Q. That is separate from the actual DRE machine that they
16 will vote on?

17 A. Right.

18 Q. Is early voting required by state law?

19 A. Yes.

20 Q. And have you started early voting?

21 A. Yes. We started early voting on Tuesday, May 30th,
22 and through -- I think last night we have had somewhere in the
23 neighborhood of 38,000 people vote already. We're on pace to
24 hit more than 80,000 voters during early voting, which would
25 mean that is going to -- we might exceed the total for the April

1 election just during early voting alone.

2 Q. Does the Secretary of State oversee your election
3 activities?

4 A. Yes. They have an oversight because the State
5 Election Board ultimately oversees the Board of Registration and
6 Elections.

7 Q. Are you subject to penalties if you don't follow the
8 mandates set by the State?

9 A. Yes.

10 Q. Now, I wanted to have you tell the Court about the
11 issue of paper balloting. You understand that the plaintiffs in
12 this action are seeking paper ballots for the remaining electors
13 that haven't yet voted. Can you tell the Court what impact
14 paper ballots for every single individual voter, what would that
15 entail for your office?

16 A. Well, if they want to ultimately have us start or vote
17 with paper ballots during early voting as well as election
18 day -- I'm not sure what the intent is -- if we go to paper
19 ballots only on election day, my guess is that the voting pace,
20 more than 60 percent of voters that will vote in this election
21 will have already cast ballots by the time we get to election
22 day.

23 But if their intent is to stop early voting and have us
24 pull all the DREs out from our six polling sites and finish
25 early voting, we won't be able to do the State-mandated -- we

1 don't have that 19-day period in which to execute early voting.
2 We'll have to retrain all the early voting poll workers. We
3 will have to order paper ballots. We will have to get each
4 ballot style available in all six early voting sites.

5 We will also, because we haven't done a paper ballot
6 election in Fulton County since 1964, some sort of procedures
7 will have to be put in place where you offer each voter more
8 than one paper ballot. So the poll worker isn't handing one
9 specific ballot. They will have to have something face down
10 where they get a choice of three or four ballots, the way it is
11 done in some other states.

12 And then when that is the case, relying on poll workers to
13 get the paper ballot back into the correct folders is another
14 nightmare that the plaintiffs haven't thought about in regard to
15 this. I've conducted early voting before with paper ballots.
16 It is -- it is almost unworkable.

17 But we would also have to recruit poll workers for -- we
18 would have to -- I'm not sure what we'll do about election day
19 because in Georgia, the state law doesn't have any sort of,
20 which I'm aware of, mandate that you have to have a certain
21 amount of people from each party in each election day polling
22 place so that there -- so that you won't have collusion in the
23 polling place among the poll workers. If they are all from one
24 party, they can mark ballots.

25 You always have a risk when you have a paper ballot

1 election of poll workers or election night workers marking
2 ballots. You can have up to a 5 percent error rate when you
3 hand-count paper ballots. And I would much more trust DREs than
4 I would a five percent error rate when you are hand-counting
5 paper ballots.

6 We will have to -- we don't have ballot boxes. We would
7 have to buy ballot boxes. Let me see. Some of the things we
8 would have to do. We would have to retrain the poll workers.
9 We would have to write procedures. We would probably have to
10 consult with the other counties and the Secretary of State about
11 those procedures. We don't have paper ballot procedures in
12 place, and it is not as simple as the plaintiffs make it seem
13 just to write a bunch of procedures down and then -- for the
14 type of election they are asking us to do.

15 The money that it will cost, I'm not sure who is going to
16 want to pay for this but --

17 Q. Can you give us an estimation of what the cost --

18 A. Well, we budgeted \$489,000 for this election. If we
19 will have to shut early voting down and also stop the logic and
20 accuracy testing on all these machines that we're preparing and
21 go to paper ballots, we'll probably need to order a minimum of,
22 I would say, 300,000 paper ballots because I guess we're going
23 to invalidate all the early votes. I don't know what they will
24 do. I mean, if they want paper ballots, we will have to
25 invalidate the early votes, which will disenfranchise all the

1 people that already voted.

2 So those -- you have to order at least 100 percent of the
3 paper ballots for the written number of registered voters you
4 have, and I think that we're somewhere in the neighborhood of
5 268,000 in the Congressional Sixth. If we will conduct early
6 voting with those, you always have to also allow for spoiled
7 ballots. So probably we would order somewhere in the
8 neighborhood of 125 percent of the registered voter count.

9 And what was your question?

10 Q. Would you hire more staff?

11 A. We would need to hire more staff, yes, for counting
12 paper ballots and also just to ensure -- I mean, all the
13 absentee ballots that have gone out and come back in, I don't
14 know if -- since they would want us to hand-count those, I guess
15 we are going to have to re-mail all of those in the new style
16 paper ballots, disenfranchise those voters as well.

17 THE COURT: I think the question was how much. You
18 have gone on a bit long. Do you have an estimate?

19 THE WITNESS: Well, yeah. Probably would need another
20 \$489,000 to start over.

21 THE COURT: Next question, Ms. Burwell.

22 BY MS. BURWELL:

23 Q. If you had to stop early voting to put together some
24 sort of process, would you be in violation of state law?

25 A. We wouldn't be able to have the -- I think the

1 election day would have to be moved.

2 Q. June 20th election day?

3 A. Yes. We wouldn't be able to complete early voting.

4 Q. Do you know if it is possible to move that date
5 without violating some state or federal mandate with respect to
6 the election?

7 A. Well, I don't think it would be -- I mean, the judge
8 can order whatever a judge wants to order. But I think it would
9 be a very unpopular decision to move that election.

10 Q. Would hand-counting be less costly than using the DRE
11 machines?

12 A. I don't see how.

13 Q. Let me ask you now about -- you received a subpoena
14 asking for documents, do you recall that, asking you to bring
15 documents with you today; correct?

16 A. I just received -- I just received the subpoena during
17 the 20-minute break, yes.

18 Q. Well, there was a subpoena and you produced some
19 documents, correct --

20 A. Uh-huh.

21 Q. -- this morning that were responsive --

22 THE COURT: Was that yes?

23 THE WITNESS: I don't remember what was -- oh, yes. I
24 know what you are talking about.

25

1 BY MS. BURWELL:

2 Q. So you produced some documents?

3 A. Yes.

4 Q. And there were other documents that were not produced;
5 correct?

6 A. Correct.

7 Q. And those are documents that you would need to -- can
8 you tell us why they haven't been produced yet?

9 A. Number three on there, we are unsure exactly what they
10 are asking for. I know that we have an open records request
11 from the Rocky Mountain Foundation. Now, that request number
12 three seems we need clarification on that. We aren't sure if
13 number three and five are the same -- basically would be the
14 same thing.

15 One person on my staff thinks that it could be that three
16 and five are similar. Number three could be the same request
17 that was in the open records request.

18 Q. Let me ask you this: What would be the cost of
19 producing the documents that have been requested thus far?

20 A. I think that we had it at, like, \$22,000 at the most
21 expensive.

22 Q. And tell the Court how you calculated that amount.

23 A. I think it is number two would take about 117 hours.
24 And since we're using the GEMS server during working hours, we
25 can't shut that down because we're doing logic and accuracy

1 testing.

2 So that is at an overtime rate of the lowest paid employee
3 that can do that, and that would be about \$40 an hour. It would
4 take approximately 117 hours to complete that. I think that is
5 number two on the subpoena list.

6 Number three, if we have to produce what was originally
7 asked for in the open records request, that would take a crew of
8 12 people about 43 to 44 hours each to complete that. And that
9 was going to be the bulk -- it was going to be over \$17,000 to
10 produce that.

11 Q. Thank you.

12 MS. BURWELL: I have no further questions.

13 THE COURT: Thank you. Mr. McGuire?

14 CROSS-EXAMINATION

15 BY MR. McGUIRE:

16 Q. Good afternoon, Mr. Barron.

17 A. Hi.

18 Q. Mr. Barron, you never conducted a hand-count of paper
19 ballots, have you?

20 A. In Texas.

21 Q. When was that?

22 A. Probably 2000, 2001.

23 Q. And how large was the jurisdiction that you did that
24 for?

25 A. Not large. 5-, 600 people.

1 Q. So you have experienced doing it?
2 A. Uh-huh. And there was a second time I think in 2003.
3 Q. Was that also in Texas?
4 A. Yes, probably same size jurisdiction.
5 Q. So you have done it at least twice?
6 A. Uh-huh.

7 THE COURT: Is that yes?

8 THE WITNESS: Yes.

9 BY MR. McGUIRE:

10 Q. Now, you testified that -- let me ask you another
11 question. You are not entirely happy with Georgia's current
12 voting system, are you?

13 A. Not that -- I mean, I like the DREs, yeah.

14 Q. But the DRE system has problems, in your opinion;
15 right?

16 A. I don't think there is any perfect system.

17 Q. So who is Tom Fitzgerald?

18 A. Tom Fitzgerald?

19 Q. Do you know that person?

20 A. No.

21 Q. TomFitzgerald@bellsouth.net?

22 A. Oh, that is actually Sally Fitzgerald.

23 Q. Who is that?

24 A. She's a poll worker.

25 Q. So on April 20th you sent her an email responding to

1 some questions about pollbook problems, in which you said,
2 "Thanks for this. It's another reason I keep saying we need a
3 new voting system". Do you remember saying that?

4 A. Probably, yeah.

5 Q. And that was talking about the current voting system
6 that you are using?

7 A. Uh-huh.

8 THE COURT: If you will say yes or no for the record.

9 THE WITNESS: Yes.

10 BY MR. McGUIRE:

11 Q. And that had to do with the pollbook sending people to
12 the wrong locations; right?

13 A. Correct. There is certain instances if it's a less
14 than countywide election, if somebody goes into the polling
15 location and they -- if it is less than countywide, if somebody
16 goes into the polling location and that person isn't eligible or
17 isn't a voter in that precinct and they look them up under a
18 different tab -- I can't remember the name of the tab right
19 now -- but what it does is it brings up the last person that was
20 looked up in there.

21 So unless somebody -- unless the poll worker calls downtown
22 to verify that, it will put last known -- the last searched
23 polling location on there.

24 Q. And so did you hear Mr. King testify that that is the
25 system working exactly as it is supposed to?

1 A. Well, he was referring to something else.

2 Q. He was referring to something different?

3 A. Yeah. I don't remember -- it wasn't that that he was
4 talking about.

5 Q. So then this is another issue with the pollbook that
6 we haven't already discussed?

7 A. I think originally that is the only issue that
8 happened with the pollbook.

9 Q. On election night in April 18th when this tabulation
10 error happened where the Roswell votes got counted for the CD-6
11 race, do you remember that?

12 A. Yes. They actually were never counted.

13 Q. They were uploaded into the --

14 A. They were uploaded by modem from one of our -- in
15 Fulton County, we have check-in centers because it is 70 miles
16 from one end of the county to the other. So we have different
17 centers where you can -- where the poll workers are assigned to
18 go, and then we send by modem -- the cards are uploaded and sent
19 by modem there down to the central server.

20 Q. And so in this situation on April 18th, the GEMS
21 server accepted the upload of votes from a different election;
22 correct?

23 A. Correct.

24 Q. And that error wasn't identified until you went to
25 export it from the Election Night Reporting System; right?

1 A. We went to export it, which at that point basically
2 what it does is it tabulates it, yeah. So it rejected it
3 because it was in the -- we had a card in the wrong bucket.

4 Q. The GEMS server didn't reject it. It was the Election
5 Night Reporting System that rejected it?

6 A. No. The Election Night Reporting System didn't reject
7 it. The GEMS server gave us the error.

8 Q. What was the error message?

9 A. It was just a lot of gobbledegook. A lot of letters
10 and numbers and I think it said December 10, 2012. But the GEMS
11 server never tabulated the Roswell votes into the CD-6. That is
12 why it rejected it when we hit the export button.

13 Q. Would you agree that there is no way in using this DRE
14 voting system to verify that the votes that are touched on the
15 screen by a voter are the same votes that are recorded in the
16 memory of the unit?

17 A. I would disagree. I believe that is -- we can produce
18 all the ballot faces off of that.

19 Q. So you can verify -- are you saying you can verify
20 that a voter voted for Georgia Washington and then the vote was
21 recorded for Georgia Washington?

22 A. Yes. Just the same as if I press the A on a keyboard
23 and the A comes up. It is the same thing.

24 Q. But all you are left with is the A on the screen;
25 right? You don't have a record of what key I pushed to create

1 the result.

2 A. Yeah, but there is software that can track keystrokes.
3 You can get audit logs, audit trails off of those things and
4 produce the ballot faces.

5 Q. But the audit logs don't show how the individual
6 voters voted, do they?

7 A. You can't tie one ballot face to an individual voter
8 in the same way you can't tie a paper ballot to an individual
9 voter.

10 Q. But you can't also tie the person's physical touching
11 of the screen to what is recorded in the system for that voter?

12 A. Well, if you -- when you do logic and accuracy
13 testing, you go through and you vote a script, and then you
14 produce those results. The script and the results that come out
15 should be the same, and that is -- I mean, that is what we do.

16 Q. So that is what you confirm when you are running it in
17 test mode?

18 A. Yes.

19 MR. McGUIRE: That is all I have on cross, your Honor.

20 THE COURT: Any questions from any of the other
21 defense attorneys?

22 MR. HEIDT: Briefly, your Honor.

23 CROSS-EXAMINATION

24 BY MR. HEIDT:

25 Q. Good afternoon, Mr. Barron. To your knowledge, is the

1 official count of the vote ever transferred through a modem or
2 the Internet?

3 A. No.

4 Q. Thank you.

5 MR. HEIDT: Nothing further.

6 THE COURT: Ms. Burwell, anything else?

7 MS. BURWELL: No, your Honor.

8 THE COURT: May this witness step down?

9 MS. BURWELL: Yes, your Honor.

10 THE COURT: All right. On behalf of DeKalb County,
11 anything?

12 MR. BRYAN: No, your Honor, we have no witnesses.

13 THE COURT: From Cobb?

14 MR. WHITE: Yes, your Honor. We call Janine Eveler.

15 JANINE EVELER,

16 having been first duly sworn, was examined

17 and testified as follows:

18 DEPUTY BRYANT: State and spell your full name.

19 THE WITNESS: Janine Robin Eveler. J-a-n-i-n-e
20 R-o-b-i-n E-v-e-l-e-r.

21 DIRECT EXAMINATION

22 BY MR. WHITE:

23 Q. Thank you, Ms. Eveler. I am just going to ask you a
24 few background questions and then try to get into some substance
25 without repeating.

1 Can you tell us your current title with Cobb County?

2 A. Director of Elections for Cobb County.

3 Q. And how long have you been in that role?

4 A. Since 2010.

5 Q. And what roles, either with Cobb County or other
6 election organizations, did you have before that?

7 A. Before that I was the elections manager. And prior to
8 that I worked in various other roles in the elections department
9 beginning in October of 2004.

10 Q. Has it all been with Cobb County?

11 A. Yes.

12 Q. Can you give us a quick thumbnail of your education?

13 A. I have an associate's degree and I'm pursuing my
14 bachelor's degree in business administration from Columbia
15 Southern University.

16 Q. I'm trying not to cover any ground that has been
17 covered. Can you tell us, in terms of Cobb County machines,
18 have there been any issues -- during your time as elections
19 director, have there been any issues with Cobb County DRE
20 machines?

21 A. No, there have not.

22 Q. Any security lapses that you are aware of?

23 A. No.

24 Q. Any major technical failures of the system?

25 A. No, sir.

1 Q. Where are the Cobb DRE machines stored?

2 A. They are stored at our Elections Preparation Center in
3 Kennesaw.

4 Q. And where are the pollbooks stored?

5 A. They are also stored in the Elections Preparation
6 Center.

7 Q. And can you -- can you tell me when voting ends in
8 Cobb County on a given election, can you describe what happens
9 with the voting cards and the voting results at that point?

10 A. Yes. The poll workers will end the election on the
11 DREs and remove the memory cards and put them in a sealed
12 envelope. And they will return those to the Elections
13 Preparation Center along with their other equipment.

14 From there they are put in cars with deputies and other
15 election -- one other election official and taken to our main
16 office, which is where our GEMS server is. And at that point
17 they are uploaded physically into the GEMS server.

18 Q. Is it fair to say that all the ballots or all the
19 results in Cobb County are hand-delivered to the central
20 location where the GEMS server is in Cobb County?

21 A. Yes.

22 Q. There is no modem reporting involved in Cobb County?

23 A. Not since 2010.

24 Q. Is there ever any time when the GEMS machine or the
25 pollbooks are connected to the Internet?

1 A. No.

2 Q. Can you tell me when early voting began in Cobb
3 County?

4 A. Early voting for mail ballots --

5 Q. For this run-off.

6 A. I don't have the exact date, but the vote-by-mail
7 ballots must be started -- we must send them out by 45 days
8 prior to the run-off, so whatever date that was. I think it
9 might have been May 2nd. And then early voting in person
10 started last week on Tuesday the 30th.

11 Q. I will show you what I marked Exhibit 2 and ask if you
12 can identify it for the Court.

13 THE COURT: Defendant's 2?

14 MR. WHITE: Yes, Defendant's 2.

15 BY MR. WHITE:

16 Q. Can you tell the Court what that is?

17 A. Yes. This is a report from my absentee supervisor as
18 of yesterday's voting.

19 Q. Is this a document you keep in the regular course of
20 business?

21 A. Yes, we do.

22 Q. Do you check these totals every day?

23 A. Yes.

24 MR. WHITE: Your Honor, I would like to tender this as
25 an exhibit for the defense. It's a business record that is

1 kept in the regular course of business.

2 THE COURT: Mr. McGuire, any objection?

3 MR. McGUIRE: No objection.

4 THE COURT: Admitted.

5 BY MR. WHITE:

6 Q. Can you tell us what the vote totals are as of
7 yesterday?

8 A. Altogether we have 10,604 ballots that are either
9 received back from paper mail ballots, absentee-by-mail ballots,
10 or voted in person, or electronic ballots returned from the
11 military and overseas voters.

12 Q. Are there additional ballots that have been mailed
13 that haven't come back in?

14 A. There are. There are a total of, looks like, 26,377
15 ballots that have been -- I'm sorry. There were some issued
16 prior to. So 9,387 have been issued prior to early voting, and
17 another 2,637 were issued after early voting began. Whatever
18 that total is.

19 Q. Can you tell me were you able to hear Mr. Barron's
20 testimony?

21 A. I was.

22 Q. And without going into problems that would be similar
23 or that he already talked about, can you tell us additional
24 problems that would happen if Cobb County had to move to paper
25 ballots at this stage in the election?

1 A. I think there are too many questions still about
2 whether we're talking about paper ballots going retroactively
3 for some of these people who already voted, which I think that
4 Mr. Barron was considering, or if it was going forward from
5 tomorrow, or if it was going forward only for election day.

6 So there are issues associated with each of those scenarios
7 that would be slightly different.

8 Q. Does Cobb County have any procedures at all that are
9 in place to have a hand-counted paper ballot race?

10 A. We do not have any procedures in place for
11 hand-counted paper ballots. We have done one audit of the
12 voter-verifiable paper audit trail that was a trial done by the
13 State in three counties in 2006. And we audited one precinct
14 that used that technology.

15 Q. And that was one of the questions I was going to get
16 to. I wanted you to tell me -- we heard some testimony earlier
17 regarding voter machines with a paper ballot trail. What is
18 Cobb County's experience with that type of technology?

19 A. We did try that technology. It is the newer version
20 of the DRE, which is the TSx unit. It has an adjunct piece of
21 equipment that has a spool of paper that records so that the
22 voter can see it and it spools the real.

23 And we took all of the reals from one precinct and we did
24 an audit to make sure that the count that we tallied by hand
25 matched that that was on the memory cards.

1 Q. And what were the results of the audit and the process
2 that led you there?

3 A. The process was quite cumbersome. We did have a lot
4 of trouble with the technology itself because it was a long
5 spool of paper. And we found that, you know, that technology
6 had some issues.

7 But as far as the counting process itself, we implemented
8 it so that we had checks in place. So we had two teams that
9 were checking each other and three people on each team. Those
10 teams at certain periods would check each other's work to make
11 sure they were still counting accurately.

12 And we had multiple restarts to that because after a
13 certain period of time, people's attention lapses and they would
14 miss a tally. And so we had quite a few restarts before we
15 could finally get through all the checks to make sure that the
16 teams were together.

17 And all in all, that one precinct to audit took us almost
18 six days.

19 Q. Six days to reconcile the results that were coming in
20 on the machine with the results you got on the paper printout?

21 A. Correct. And we did eventually get to the point that
22 we were -- both teams had been in check step the whole time and
23 came up with the same number as the machine.

24 Q. And am I correct in recalling that this was part of a
25 State-authorized program?

1 A. Yes, it was.

2 Q. And it was -- who all participated?

3 A. There were three counties. I believe it was Bibb and
4 Camden and Cobb.

5 Q. And do you know what the results of that test or that
6 report was?

7 A. We issued a report and the State determined not to go
8 with that technology. But I wasn't part of that decision.

9 Q. When you say the State, were you reporting to the
10 Secretary of State?

11 A. Yes, sir.

12 Q. So, to your knowledge, this report was submitted to
13 the Secretary of State regarding this test run with machines
14 that had a paper trail, and a determination was made in 2006
15 that the technology was not technology that the State wanted to
16 invest in?

17 A. I can't really speak to the decision-making, but we
18 did not implement that going forward.

19 Q. Cobb County, nor did any other --

20 A. Correct.

21 Q. -- elections board in the state that you know of?

22 A. Right. And we wouldn't have discretion to make that
23 decision ourselves. That would be a State decision.

24 Q. I think Mr. Barron covered most of my other questions
25 except one question, and I will mark this document as

1 Defendant's Exhibit 3 and ask you about this.

2 [Brief pause.]

3 Q. Can you identify that document for the Court?

4 A. Yes. This is our GEMS summary report from the 2012
5 general primary.

6 Q. And is it the Republican primary from 2012?

7 A. Yes -- oh, I'm sorry --

8 Q. It covers both?

9 A. -- it has both because it is the summary report.

10 Q. And is this a document that is kept in the regular
11 course of business in your office?

12 A. This actually is -- it is a regular historical
13 document from our website.

14 Q. Okay.

15 MR. WHITE: I would tender this exhibit to the Court,
16 and I'll get to its relevancy, but I wanted to tender it as
17 a document that is kept in the regular course of business
18 by the Cobb County Elections Department.

19 THE COURT: Mr. McGuire?

20 MR. McGUIRE: We object on relevance because it is
21 five years old, different election. But other than that.

22 THE COURT: What is the relevance, Counsel?

23 MR. WHITE: Your Honor, the relevance -- and I can ask
24 Ms. Eveler this question to get there.

25

1 BY MR. WHITE:

2 Q. Ms. Eveler, can you look about halfway down there and
3 tell me what the results of the U.S. House race for the Eleventh
4 District says in the Republican column? Can you tell me who ran
5 in that race?

6 A. Yes, sir. There were three candidates. Phil Gingrey,
7 William Llop, and Michael Opitz.

8 Q. And who was the winner of that race?

9 A. That was Phil Gingrey.

10 Q. But Mr. Opitz did receive -- can you see how many
11 votes he received?

12 THE COURT: I'm still trying to determine what the
13 relevance is. I don't understand what the --

14 MR. WHITE: Well, the relevance --

15 THE COURT: May I finish, Counsel?

16 MR. WHITE: I'm sorry.

17 THE COURT: I need to speak up. I did not understand
18 what the relevance was earlier in the hearing relating to
19 this particular individual, and I still don't hear it.

20 MR. WHITE: Okay. In order to claim associational
21 standing, Rocky Mountain Foundation has claimed Mr. Opitz
22 is their member who lives in Cobb County who --

23 THE COURT: I heard all that testimony.

24 MR. WHITE: So Mr. Opitz had an opportunity in 2012,
25 if he was concerned about this technology, to contest these

1 election results that took place on this very equipment.
2 Yet in 2012 it didn't bother him enough to file a contest.

3 And in 2017 it seems they are saying he is worried
4 enough about it that he wants RMF to bring this lawsuit on
5 his behalf, purportedly.

6 So that is the relevance here, is that he had an
7 opportunity to directly challenge this technology in 2012,
8 and they are using him as the hinge for associational
9 standing in this case. And so we think this is relevant to
10 show if he wanted an opportunity to challenge it, he had
11 his chance in 2012.

12 THE COURT: I thought that is what your argument was.
13 Anything else on behalf of plaintiffs?

14 MR. McGUIRE: If I can just respond. We don't see
15 what the relevance is of what his intentions were five
16 years ago versus today.

17 THE COURT: Neither does the Court. Defendant's 3
18 will not be admitted. Your objection is sustained.

19 BY MR. WHITE:

20 Q. Ms. Eveler, I'm not going to ask you to do a cost
21 estimate for doing paper ballots, but I do want to ask you for
22 your estimate of how long it would take to even get something
23 like that going with paper ballots, hand-counted run-off.

24 A. I really don't know. I have never done it. We have
25 speculated on how we would do it and whether we could even ask

1 poll workers, because we won't see them in training before the
2 election, how they would manage those activities at the poll
3 remote from us, or whether we would be bringing those in, those
4 paper ballots in to a central location and, you know, getting a
5 crew together to do a hand count. We really don't have enough
6 information to know how to proceed.

7 MR. WHITE: That is all I have, your Honor.

8 THE COURT: Anything, Mr. McGuire?

9 MR. McGUIRE: Just briefly.

10 CROSS-EXAMINATION

11 BY MR. McGUIRE:

12 Q. Ms. Eveler, hi. You testified there had been no
13 security lapses in Cobb County in connection with this election;
14 right?

15 A. True.

16 Q. Now, pollbooks were stolen on April 15th, weren't
17 they?

18 A. Yes, but I don't believe that was the question. I
19 think it was about the DREs.

20 Q. You would consider pollbooks being stolen as a
21 security lapse; right?

22 A. I would have to look back to what the question was,
23 but it was a lapse in judgment and it was a crime, so, yes.

24 Q. So someone took pollbooks, and were they returned?

25 A. They were not.

1 Q. And were they ever recovered?

2 A. Not to my knowledge.

3 Q. Okay. Did you make any changes or did Cobb County
4 make any changes to its election system to account for the loss
5 of pollbooks?

6 A. Yes, the entire system at that poll was changed.

7 Q. And that just was effective at just that one polling
8 location?

9 A. Yes.

10 Q. Now, you talked a little bit about a voter-verified
11 paper trail, or VVPAT. You are aware that the plaintiffs are
12 not asking for that to be a solution to the problem in this
13 case; right?

14 A. I am not aware of what exactly the plaintiff is asking
15 for.

16 Q. So in Exhibit 2, Defense Exhibit 2, which you were
17 shown, at the bottom in yellow next to mail it says 6,875. That
18 is mail ballots, right, that have been returned?

19 A. Those are mail ballots that have been returned.

20 Q. And those are all paper ballots?

21 A. Yes, optical scan.

22 Q. So the way you will count them is, unless the Court
23 orders differently, the way you count them is on an optical
24 scanning machine?

25 A. Correct.

1 Q. But you could just as easily have your poll workers
2 look at them and count them?

3 A. Those are not at the poll. Those are in our office.

4 Q. But they can be tabulated by people who look at
5 physical paper and tally the votes; right?

6 A. Yes.

7 Q. And just on the pollbooks, last question. When those
8 pollbooks were stolen April 15th, when did Cobb County make the
9 changes to account for the fact the pollbooks had been stolen?

10 A. When you say the changes, do you mean when did we
11 replace everything?

12 Q. I guess what changes did you make?

13 A. Everything at that poll was replaced. The pollbooks.
14 We have new pollbooks, new scanners. The DREs were changed.
15 The memory cards were changed. The database was changed. And
16 that was all taken care of on Monday, the 17th.

17 Q. That sounds like a big effort. Was it a big effort?

18 A. Yes, sir.

19 Q. And why would you make such a big effort simply
20 because pollbooks had gone out of your staff's possession?

21 A. It was a chain-of-custody breach, so we would make all
22 abundance of caution to make sure that it was all in our custody
23 at all times.

24 Q. And the reason for that is because elections are
25 important; right?

1 A. Absolutely.

2 Q. And you need to always presume in a direction that
3 preserves the integrity of the vote; right?

4 A. You need to do everything reasonable to make sure that
5 what you are doing is done correctly, yes.

6 Q. Okay.

7 MR. McGUIRE: I have no further questions.

8 THE COURT: Anything else, Mr. White?

9 MR. WHITE: No, your Honor.

10 THE COURT: May this witness be excused?

11 MR. WHITE: Yes. Thank you.

12 THE COURT: You may step down. Thank you.

13 Are there any other witnesses from whom the Court
14 needs to hear from any of the defendants?

15 MR. HEIDT: Not on behalf of the Secretary of State.

16 THE COURT: Thank you.

17 MS. BURWELL: No, your Honor.

18 MR. BRYAN: No, your Honor.

19 MR. WHITE: Not from Cobb County, your Honor.

20 THE COURT: Anything else on behalf of the plaintiffs?

21 MR. McGUIRE: Your Honor, if I may have one moment to
22 confer with counsel if we need a rebuttal witness.

23 [Brief pause.]

24 MR. McGUIRE: Your Honor, we want to call Mr. Felten
25 for quick rebuttal.

1 THE COURT: I will remind you, sir, that you are still
2 under oath. Thank you.

3 THE WITNESS: Thank you very much.

4 EDWARD WILLIAM FELTEN,
5 having been previously sworn, was examined
6 and testified as follows:

7 DIRECT EXAMINATION

8 BY MR. McGUIRE:

9 Q. Mr. Felten, you have heard the testimony of Mr. Barron
10 and Ms. Eveler, have you not?

11 A. Yes, I have.

12 Q. I want to direct you quickly to something Mr. Barron
13 said. He spoke about that he thought it was possible to verify
14 the voters' intent to vote a certain way was accurately
15 reflected in the records of the DRE. Did you hear that piece of
16 his testimony?

17 A. Yes, I did.

18 Q. What was your -- do you agree with him?

19 A. No, I don't.

20 Q. Can you tell us why?

21 A. Yes. The only records that exist that purport to show
22 how the voter voted, which buttons they pressed on the screen,
23 are the ones in the memory of the DRE. And as I described this
24 morning, those are subject to manipulation should there be
25 malicious software on the machine. There would be no record

1 directly recorded what the voter had done in that scenario.

2 Q. Thank you. And then I also want to ask about this
3 missing pollbook issue. I believe on direct first time you
4 testified that the pollbooks had something to do with the key,
5 the voter cards. But maybe can you just remind the Court and
6 the courtroom what the importance of the pollbooks is in the
7 process.

8 A. The pollbooks are involved in the process of
9 validating the voter and of giving the voter the voter card,
10 voter access card, which they use to put into the machine in
11 order to enable it to receive a vote.

12 Q. And if the pollbook is taken by an adversary or an
13 adversary has access to it, what sort of harm can that adversary
14 do?

15 A. It would be helpful to an adversary who is interested
16 in understanding how to make voter access cards that are
17 fraudulent.

18 Q. And was the response that Cobb County took in response
19 to the loss of pollbooks, did that sound appropriate to you?

20 A. The steps that -- those steps, I think in my judgment,
21 were necessary but they would not be sufficient to completely
22 reverse the risk that was created by those pollbooks falling
23 into unknown hands.

24 Q. And then, finally, we heard a couple times from
25 different witnesses that the Georgia's DRE system never connects

1 to the Internet. Is that a statement that you agree with?

2 A. Based on the testimony that I heard today, it appears
3 that the systems are connected indirectly to the Internet. What
4 that means is that there is -- and I described this a bit on my
5 testimony this morning about how one thinks about the risk of
6 compromise as being, in effect, contagious from one machine to
7 another.

8 So if the DRE is connected to a system which is connected
9 to something which later connects to the Internet, for example,
10 there is an indirect connection there. And those indirect
11 connections are things that one needs to worry about against a
12 sophisticated adversary because there have been examples of
13 adversaries who use a multi-hop strategy to get from the open
14 Internet onto a system they want to compromise.

15 MR. McGUIRE: Nothing further.

16 THE COURT: Anything else on behalf of the Secretary
17 of State?

18 MR. HEIDT: Yes, your Honor, briefly.

19 CROSS-EXAMINATION

20 BY MR. HEIDT:

21 Q. Mr. Felten, referring back to the question that you
22 just answered, do you have any knowledge that any sort of a hop
23 or any sort of connection from any Internet-connected device to
24 any device that will be used in the upcoming election has
25 occurred?

1 A. Sitting here I can't say for certain.

2 Q. You have no knowledge?

3 A. I would have to review the -- I would have to review
4 the operation of the system and what connects to what in order
5 to say for certain.

6 MR. HEIDT: Thank you.

7 THE COURT: Anything else, Ms. Burwell, on behalf of
8 Fulton County?

9 MS. BURWELL: No, your Honor.

10 THE COURT: From DeKalb or Cobb County?

11 MR. BRYAN: No, your Honor.

12 MR. WHITE: No, your Honor.

13 THE COURT: Anything else that the Court needs to hear
14 in the way of evidence?

15 MR. McGUIRE: Nothing from us, your Honor.

16 THE COURT: I will give you five minutes and then I'd
17 like to proceed with argument.

18 [The proceedings stood in recess.]

19 THE COURT: Ready to resume? All right, I will start
20 with you, Mr. McGuire.

21 MR. McGUIRE: Thank you.

22 THE COURT: Just so that we're clear, so we're not
23 back and forth, Mr. McGuire, will have the last word
24 after -- let's try to make your arguments such that we
25 don't have to have follow-up for everyone to the extent

1 that is possible. I'll give the plaintiff the last word.
2

MR. McGUIRE: Thank you, your Honor.

Your Honor, this is a voting rights case in a federal election, and it is happening in the middle of one of the most alarming public environments of concern that certainly is, in memory, about the interference of a potential foreign power in our last presidential election and ongoing representations about that and other intrusions into our election system.

As a voting rights case, as a case that involves voting, we have seen a lot of motions from the other side about standing and about whether we have a cause of action.

We have a cause of action for the violation of the fundamental right to vote which underlines all of our request for relief in this case. We sought declaratory relief, injunctive relief, and mandamus. And those causes of action all overlay the injury, which is to the fundamental right to vote.

The fundamental right is a federal constitutional right that is typically given cause of action against the state officials and local officials through 42 USC 1983. That is not specifically pled in our complaint, it's not invoked. But the U.S. Supreme Court in 2014 ruled in *Johnson v. City of Shelby*, which is 135 S.Ct. 346, that you don't have to invoke section 1983 in a complaint to have a

1 valid -- to have a valid claim under it.

2 And what we have done in our complaint, paragraph 43
3 is: The fundamental constitutional right to vote of the
4 voters who are plaintiffs and of the members of Rocky
5 Mountain Foundation, which is a plaintiff, are threatened
6 by having to cast their votes in an environment like this
7 using a voting system that is neither safe nor reliable.

8 The fact that 42 USC 1983 gives us a cause of action
9 dispatches with the argument about sovereign immunity. It
10 dispatches with the argument about right of action. There
11 is standing. The evidence has shown that Citizen Center
12 has members who are voters in each of the three counties.

13 And although there were some leading questions about
14 whether some of those members lived at certain addresses,
15 there was no evidence that they didn't and there was
16 testimony that they did.

17 So Citizen Center -- I'm sorry, Rocky Mountain
18 Foundation does have the standing, associational standing
19 to bring this case. And the two plaintiffs who verified
20 the complaint -- Ms. Donna Curling and Ms. Donna Price --
21 also as voters have standing. Ms. Donna Curling is a
22 resident of Fulton but her standing is good with respect to
23 the other two counties as well because all three of these
24 counties are using the same voting system.

25 And so the hack or an intrusion or an error in the

1 voting system that effects Cobb County, for example, is
2 going to affect the right of voters in Fulton County and
3 DeKalb County because they are all part of the same
4 district.

5 So the standing, we think, is established, and I'm
6 happy to rebut any additional arguments on it.

7 As far as the relief we're seeking in this hearing
8 today, what the plaintiffs want is they want this Court to
9 declare -- they're asking this Court to declare that the
10 use of this DRE-based voting system is impracticable under
11 OCGA 21-2-281 and dash 334. What that determination does
12 is it then -- it triggers the statutory authorization to
13 use voting by paper ballots as the alternative.

14 And as the evidence that has been put on today shows,
15 it is impracticable to use these machines because they are
16 not safe and they are not accurate. And the risk -- they
17 have to be presumed to be compromised, based on what we
18 know about them and based on what we know about current
19 events, recent events. They have to be presumed to be
20 compromised.

21 And you heard Mr. Felten testify about all of the
22 different ways the DREs could be used maliciously, how they
23 could be compromised by an adversary. You heard
24 Mr. DeMillo speak about it is a fundamental presumption of
25 security, of cybersecurity that you have to presume you are

1 going to be under attack by a sophisticated adversary. And
2 in this case we know from what is in the news is that is,
3 in fact, the case with respect to the United States
4 generally.

5 We know this is a prominent election, the most
6 extensive election in U.S. history for a congressional
7 seat. So we have to presume, based on what we know about
8 the vulnerabilities of the system and what we know about
9 the recent issues that the system has encountered, that
10 there is a very real risk that this is -- that it's
11 compromised.

12 And since this is an important election and since
13 voters are concerned and their right to vote is burdened by
14 that concern, which is justifiable under the circumstances,
15 the right thing to do in our view is to declare that in
16 this particular election this voting system's use is
17 impracticable and, therefore, to order a solution that
18 Georgia law contemplates, which is voting by paper ballots.

19 We've heard a lot of creative hurdles about voting by
20 paper ballots, but the simple fact is it's a function of
21 Georgia law. Georgia law provides for it.

22 THE COURT: One of the questions I have is to the
23 extent that you believe that is a reasonable decision for
24 this Court to make in light of the fact that we are well
25 into early voting. How do you accommodate the voters who

1 have already gone to the polls and those that may not be in
2 a position to vote again by paper ballot on the actual day
3 of the election?

4 MR. McGUIRE: We're very sensitive to that concern.
5 That is why we tried to bring the case before when we
6 started and we were, unfortunately, unable to get it --
7 there was a statutory notice period that ran up against us.

8 We're not asking for anyone who already voted to be
9 denied the vote. If they already cast their vote, that
10 vote should be counted. But that doesn't mean that
11 additional voters should be subjected to the risk their
12 votes will be cast on an unreliable, unsafe system.

13 Now, I think there are -- there are some people who
14 have already voted. Those votes can be tallied and added
15 to the remainder of the votes that are going to be counted
16 the way that we're proposing. And I don't think that there
17 is an issue with that as far as no one would be
18 disenfranchised.

19 What would happen instead, we would be mitigating the
20 harm before the harm continued to get worse. Every new
21 person that votes and every new day of voting, the harm
22 which is the exposure of voters to this unreliable, unsafe
23 system grows. So I think --

24 THE COURT: So the remedy that you are proposing to
25 the Court is to allow all the votes that have been cast up

1 to a certain point to stand but to then require perhaps the
2 use of paper ballots on election day but those previously
3 cast votes would not be thrown out?

4 MR. McGUIRE: We --

5 THE COURT: Because I'm wondering as a practical
6 matter how that works.

7 MR. McGUIRE: Right. Our ideal situation would have
8 been everyone voted on paper. But since we're now at a
9 date where that is not possible, unless we have everybody
10 revote, and that would, I think -- that kind of
11 inconvenience would be a problem for the voters who already
12 voted. We're not concerned about the county's ability to
13 handle it. They are professionals and they do this
14 regularly. This is the kind of thing they could manage.
15 It is more an issue of the voters who would be harmed by
16 it.

17 And I think the best solution -- I mean, the ideal
18 solution would probably be to allow those people who have
19 already voted -- you know who they are because that is
20 recorded in the voter rolls -- they could vote again. But
21 that probably wouldn't work because they have already --

22 THE COURT: Please don't do that. I'm speaking to the
23 gentleman behind you with the head shaking. That is not
24 professional.

25 MR. McGUIRE: So, your Honor, the relief that we're

1 requesting is that from this point forward people be
2 allowed to cast their votes the safe way, which is on
3 paper.

4 THE COURT: But does that address your concern to the
5 extent the DRE systems are unreliable, not safe, and create
6 an issue as it relates to verification? How do you justify
7 using votes that have been cast using that system,
8 implement that system and pairing those votes with paper
9 ballots, should the Court elect to go down that path?

10 It seems to me that doesn't accomplish what it is that
11 you would be seeking to accomplish, never mind the fact
12 that there has not been produced during the course of this
13 hearing and all the testimony that we heard for the past
14 six and a half hours any testimony that there is
15 information that you-all have received that votes have been
16 manipulated in some way such that this is an issue.

17 MR. McGUIRE: Right. I mean, it is a difficult
18 situation because people have already begun voting and you
19 don't want to -- you don't want those people to lose their
20 right to vote. It is possible that their votes aren't
21 accurately reflected on the system as it is.

22 THE COURT: But it is possible they are.

23 MR. McGUIRE: It is possible they are.

24 THE COURT: And the problem is we don't know because
25 all this is speculation. I certainly understand that --

1 I'm not at all unaware of the heightened sensitivity
2 surrounding this idea of election fraud. But we hear that
3 quite often, and I have heard very little evidence in the
4 media, in journals, and articles that I have read and
5 evidence in the evidence presented to the Court today.

6 So aside from speculation, which we might engage about
7 what might happen, is it justified? Is what you are
8 proposing justified in light of the fact that we already
9 have voters who have cast ballots? And to require them to
10 come back out and cast ballots at a later time, seems to
11 me, would create a situation where those voters are
12 significantly inconvenienced.

13 I'm not concerned about the counties at this point
14 because I think it is important to make sure that we get
15 this right. So if that is the right outcome, then the
16 counties will have to do whatever is necessary, from the
17 Court's perspective, to deal with that. But I'm concerned
18 about what you are asking me to do in light of where we
19 find ourselves in this election period.

20 Were we at a place, perhaps, where this was before
21 early voting began -- and there was estimation that in
22 Fulton County by the time we get to election day, some 60
23 percent of Fulton County electors choosing to vote in the
24 election will have already cast ballots.

25 So given where we are in this timeline and in this

1 election cycle, is this a reasonable result, and is what
2 you're asking something that will advance the argument that
3 you have made concerning issues around voting?

4 MR. McGUIRE: I think there are two answers to that.
5 First, on the speculation question, I mean, with voting
6 irregularities, there is also the question of whether the
7 injury is speculative or whether it is a system error. And
8 the example that I like to use is Russian roulette. People
9 play Russian roulette. We know that Russian roulette isn't
10 going to take you out five times out of six if you have a
11 six-chamber gun and you are playing Russian roulette. And
12 I assume the Court is -- one bullet in and you spin it.

13 It is not true. You still can't say that just because
14 you have a one-in-six chance that it is safe five times out
15 of six. It is unsafe six times out of six, but you only
16 get the consequence the one time out of six.

17 THE COURT: But if I am making a decision based on the
18 evidence that is before me, where is the authority for me
19 to join in your speculation that there are issues that need
20 to be addressed by this Court today?

21 MR. McGUIRE: I don't think it is speculation. I
22 think that the testimony you heard from Mr. Felten and
23 Mr. DeMillo show that it is not speculative that this
24 system has vulnerabilities. And in cybersecurity, the only
25 correct assumption to make when there are cyber

1 vulnerabilities is that you have an adversary who is taking
2 advantage of those.

3 And the fact that Cobb County's clerk herself seems to
4 have taken that approach when it came to losing
5 pollbooks -- she changed everything in her precinct even
6 though she didn't know what had happened -- and that is her
7 crediting the principle that -- it is the principle of
8 precaution, which is when you know a really damaging result
9 will come from a risk that you are not certain will
10 materialize, the right thing to do is to assume it will
11 materialize so you prevent the harm.

12 And when it comes to the solution, which is the second
13 point your Honor raised, I think it is not an ideal
14 solution but there is no ideal solution in this scenario
15 because if we don't change things, we expose the entire
16 electorate to this risk. And we have an election which is
17 incredibly -- that's got incredible national focus. It is
18 going to be close. There may be challenges, and we will
19 potentially have an election system outcome where it is
20 completely unverifiable.

21 THE COURT: Since you raised that issue, isn't the
22 challenge the way to address, perhaps, issues that you
23 believe might exist with respect to the voter procedure?
24 Because the fact of the matter is even paper ballots aren't
25 foolproof. Paper ballots don't eliminate the possibility

1 of ballot manipulation.

2 MR. McGUIRE: That is true, but what paper ballots
3 give you is they give you an actual trustworthy record of
4 what the intent was of the person who marked that ballot.

5 THE COURT: Provided there is no manipulation of the
6 ballots that have been placed in that box.

7 MR. McGUIRE: That is true.

8 THE COURT: Your own expert, Mr. Felten, testified
9 that paper ballots cannot eliminate the possibility of
10 fraud.

11 MR. McGUIRE: The difference between paper ballots and
12 fraud that would be conducted through paper ballots and the
13 kind of fraud conducted here is that a fraud that can be
14 conducted on paper ballots is going to be more detectable.
15 It's going to be more difficult to accomplish on a
16 widescreen scale.

17 A fraud here takes one person in a dark room with
18 skills that knows how to do this stuff, and that person can
19 affect the entire election because of the vulnerabilities
20 that the system has.

21 THE COURT: Does the how matter if the outcome is the
22 same?

23 MR. McGUIRE: I think it is the magnitude of threat
24 that matters. I think that the paper ballots -- I mean,
25 elections have always been controversial and we have

1 contest challenges because people challenge the results all
2 the time.

3 The problem with an election conducted on DRE machines
4 is there is literally nothing to check. You know, there is
5 no record of where the voter touched the screen. There is
6 only what the computer says the person did. And so the
7 result is not verifiable at all.

8 THE COURT: It seems to me that the state of Georgia
9 would be well served to implement a voter-verified paper
10 ballot perhaps to accompany the DRE, and I understand the
11 testimony was there was some effort to do something like
12 that but it didn't work. That doesn't mean it is not worth
13 revisiting.

14 But given where we are at this point -- I'm not
15 suggesting that those types of enhancements don't need to
16 be explored in the future. Given where we are today and
17 what it seems to me you acknowledged as it relates to those
18 voters who already have cast ballots, is there a way that
19 the Court can grant the relief that you are requesting that
20 makes sense in light of the fact that early voting has
21 commenced? We are at this point more than a week into
22 early voting. We only have a few days remaining leading up
23 to election day. And you acknowledge that in all
24 likelihood there won't be an expectation that those voters
25 who already cast ballots would be required to come back out

1 on election day and cast paper ballots.

2 So I guess I'm not quite sure what you expect to
3 accomplish if you have a percentage of the ballots that
4 were cast using the DRE system that, obviously, plaintiffs
5 believe are subject to manipulation, not reliable and
6 secure, as compared with another portion of the electors
7 using paper ballots and counting them together to determine
8 what the outcome of this election will be. If it is
9 tainted as you suggested, then it is tainted.

10 MR. MCGUIRE: Right. The benefit of the way most
11 contest statutes work out -- and I confess I'm not
12 100 percent clear on Georgia's contest statutes --
13 typically the contest statute, it is shaped by the
14 principle of you've only got a claim if the error covers
15 the margin of victory.

16 So applying that principle to this situation,
17 mitigating the harm in its tracks, stopping the harm in its
18 track is the best solution. I mean, the best solution
19 would be to have done this a week ago. But the best
20 available solution is to stop it tomorrow and have people
21 voting on paper ballots tomorrow going forward because that
22 way the minimum number of voters are exposed to this risk
23 and the remainder of the electors are spared from risks.

24 THE COURT: Well, the reality, Mr. McGuire, is it
25 wouldn't be tomorrow because even at 5:30, if the Court

1 ordered what you have requested, if I grant relief that
2 you're requesting, we have to allow some reasonable period
3 of time for Fulton, DeKalb, and Cobb Counties to get up to
4 speed to be prepared to move forward with paper ballots.

5 So those people who planned to vote early for any
6 variety of reasons might be disenfranchised because that
7 opportunity would not exist. It could be the fact some
8 people are only able to vote tomorrow. And at this
9 juncture, it seems to me that is probably not something
10 that is likely to happen.

11 So even bringing your challenge last week, it seems to
12 me, would not have allowed for the Court to meaningfully
13 consider what you're asking and to allow the implementation
14 of some alternative voting system to make sure that
15 everybody who is registered and planned to vote in this
16 special election for the Sixth Congressional seat would
17 have an opportunity to do that.

18 MR. MCGUIRE: And I appreciate that concern. My
19 response to that would be that the counties do already have
20 paper stock on hand that they could use beginning tomorrow
21 because when a voter comes in without ID, you have to give
22 them a provisional paper ballot to fill out. The law
23 provides for paper ballots if the machines were to have a
24 power outage. They would allow people to vote on paper
25 ballots. They have stock on hand. And ballot vendors,

1 there is no testimony about it but --

2 THE COURT: Which means it is not before me.

3 MR. McGUIRE: But it stands to reason that ballot
4 vendors can produce a ballot --

5 THE COURT: I'm not suggesting they can't. The
6 question is how quickly they could do it and whether that
7 would impact the ability of the affected counties to be in
8 a position to allow individuals who report to vote as early
9 as tomorrow in accordance with the early voting schedule to
10 be able to cast a ballot.

11 MR. McGUIRE: I'm sure we could offer additional
12 testimony on that issue. I am sure Rocky Mountain
13 Foundation has at its disposal people who can speak to
14 that. If that were to be the consideration that would
15 guide the Court's decision, I think that we can address it
16 and we would be willing to do so all but immediately.

17 So my expectation would be from our perspective the
18 best solution would be to stop it right away, and we think
19 that the counties would be able to use the ballot stock
20 they have on hand to get them to the initial period that it
21 takes to get the new paper ballots ordered and in.

22 THE COURT: But as to addressing the Court's concern
23 of merging the two different types of ballots and getting
24 impropriety with what might result therefrom, there is
25 really no answer to that because at this point that is what

1 we're working with.

2 MR. McGUIRE: For an election that is in midstream,
3 there are two options. There is make the change and say it
4 is in mitigation of harm going forward, or it is doing a
5 re-election, which I know is an even more serious step.
6 But that step would protect all the voters. In an ideal
7 world, we would have done it two to three weeks ago.

8 But the fact that some voters have been exposed to
9 this risk should not mean that, in our view, that all of
10 the remaining electorate should be exposed to the same
11 risk.

12 Of course, it is up to the Court's wisdom to fashion a
13 remedy that is appropriate under the circumstances, but
14 from our position, our voters, the plaintiffs, do not want
15 to have their fundamental right to vote infringed by using
16 these systems and having other people using these systems.
17 And to the extent it is minimized, that is what we're
18 seeking.

19 THE COURT: So the elephant in the room is to the
20 extent your clients are concerned about that, what
21 prevented this suit from being brought earlier?

22 MR. McGUIRE: So that goes to the question of laches,
23 which the other side raised.

24 A lot of the developments that have really heightened
25 the alarm of the plaintiffs, in particular, are very recent

1 developments. The KSU report, which I believe is admitted
2 as Exhibit 2, Plaintiff's Exhibit 2, was only produced to
3 us in the middle of May. May 15th, I believe, something
4 like that. And then we only learned of some of the other
5 things mentioned today even more recently than that.

6 Some of the older stuff has been in the press and,
7 obviously, it was elicited earlier that DREs have been a
8 problem forever for a lot of people. Obviously, Mr. Felten
9 had been doing research on them since the early to
10 mid-2000s. So there has always been concern in the
11 background.

12 But what has really heightened the concern right now
13 is the recent things that we, our plaintiffs, have learned
14 as well as the developing reporting on the threat
15 environment that is out there. Just yesterday there was
16 this huge piece of news about the NSA, from the NSA
17 document which talks about Russian military intelligence
18 seeking to interfere with U.S. elections. That is the
19 adversary that Mr. Felten --

20 THE COURT: But that isn't new.

21 MR. McGUIRE: Excuse me?

22 THE COURT: That is not new. The discussion around
23 that prospect has been floating around for at least six to
24 eight months.

25 MR. McGUIRE: Certainly there have been allegations

1 and intimations. But my understanding of what was released
2 yesterday was that it is an actually leaked classified
3 document that has details that talk about infiltration into
4 voting registration systems. And that, I believe -- I
5 believe it is -- if it is not new, it is much more focused
6 in terms of who the adversary is, how it is plausible that
7 there is an adversary interested in doing that. Our own
8 government thinks that a foreign power is trying to
9 interfere with our elections. And, obviously, that
10 document wasn't meant for public release but it is out
11 there, and it was just released yesterday. And it's the
12 top story on every news site yesterday.

13 THE COURT: I understand that, Mr. McGuire, and I
14 certainly appreciate how I think most Americans feel with
15 the prospect that a foreign power would attempt to
16 influence any election, presidential or otherwise, in the
17 United States.

18 My question still, though, is in light of those
19 allegations from the last presidential election up through
20 some of the challenges that were discussed in the testimony
21 today during the primary election in April, what prevented
22 your clients from seeking the relief you are now requesting
23 in a more timely fashion so the Court might have an
24 opportunity to fashion, perhaps, an appropriate remedy
25 without compromising the ability of the government of this

1 state and the municipalities from moving forward with their
2 elections?

3 MR. MC GUIRE: In my experience, the difficulty with
4 election litigation is that you are always having a new
5 election. So you are either dealing with a problem that
6 your action is premature because the election it is too far
7 out, or you are dealing with a problem that you are
8 raising, which is you are coming in at the last minute and
9 Courts are reluctant to sometimes do things at the last
10 minute.

11 So I think there is intention there, and all I can say
12 is that we have tried our best to bring the case at the
13 earliest possible opportunity. Given that a lot of the
14 alarm really went up and made the plaintiffs think we have
15 to bring this case now is because of some of the recent
16 developments and the issues that we learned about Kennesaw
17 State.

18 And, particularly, that set off a lot of conversation
19 and alarms because that is a specific report that deals
20 with vulnerabilities of this specific voting system as it
21 is administered by the State's agent. And that was only
22 two weeks ago. At this point it is three weeks ago. Our
23 lawsuit was filed a week and a half ago. So we did file
24 the lawsuit very quickly after that report was released.

25 THE COURT: And so the record is clear, it wasn't the

1 Court's delay in hearing it that prevented it from being
2 heard sooner. But there, as you mentioned, are rules, and
3 the law requires that the State be provided five days'
4 notice unless it is waived. Coupled with the fact the case
5 was originally assigned to another judge on this Court who
6 recused from hearing the case for different reasons, that
7 is what brought us here today.

8 MR. McGUIRE: That is why we are so grateful you were
9 able to fit us in today because this is the earliest --

10 THE COURT: Earliest opportunity, right.

11 MR. McGUIRE: When we had our hearing two Fridays ago
12 and this notice issue came up, our request was to drop the
13 Secretary of State from the lawsuit because we don't
14 honestly think the Secretary of State needs to be a
15 defendant in connection with the issues that are at issue
16 here in this proceeding. Because the question of whether
17 you use -- whether it is practicable to use a voting
18 machine is not a decision that the Secretary of State needs
19 to sign off on.

20 The other side argued that the Secretary is a
21 necessary party, which we disagreed with, but we lost on
22 that. And that is why we were subjected to the five-day
23 waiting period. If we prevailed on that, we would have had
24 this decision, assuming it went our way, before the voting
25 started. So timeliness we did --

1 THE COURT: Voting started on Tuesday, last Tuesday.

2 MR. McGUIRE: And we were here the Friday before.

3 THE COURT: So you still would not have had very much
4 time.

5 MR. McGUIRE: It would have been quick, yes.

6 THE COURT: And Monday was a holiday.

7 MR. McGUIRE: Correct.

8 THE COURT: So you had essentially one business day so
9 it still would not have allowed, at least from the Court's
10 estimation, a reasonable amount of time, even on an
11 emergency basis, for the matter to be considered and
12 addressed.

13 MR. McGUIRE: As I pointed out at that hearing,
14 though, election litigation happens so quickly. Frequently
15 people will go to court and get relief the same day because
16 of issues at a polling place that require Courts to
17 intervene. So it is not unheard of for you to be able to
18 get action within four calendar days before voting begins.

19 But I agree, we would have always preferred to bring
20 it sooner if we could, but we brought it as soon as we
21 could.

22 THE COURT: Anything else?

23 MR. McGUIRE: I can address the injunction standard
24 and say how I think we agree with it, but since I have
25 spoken quite a bit and I asked for 15 minutes, I would

1 reserve for rebuttal. Thank you, your Honor.

2 THE COURT: Thank you. On behalf of the Secretary of
3 State?

4 MS. CORREIA: Thank you, your Honor.

5 We have heard just now for the very first time in this
6 lawsuit that this is actually a federal lawsuit and that
7 plaintiffs brought it under 42 USC 1983 and they just
8 forgot to plead it in their complaint. They also forgot to
9 plead that it was a Fourteenth Amendment federal
10 constitutional claim or Fifteenth Amendment federal
11 constitutional claim. And they affirmatively stated in
12 their jurisdiction and venue section of the complaint that
13 this case arises under the Constitution and the laws of the
14 state of Georgia.

15 This is a Georgia state law and Georgia constitutional
16 claim. They are trying to change it into a federal
17 constitutional claim now because they understand that the
18 claim is barred by sovereign immunity because the sovereign
19 immunity is in the State Constitution and cannot be waived
20 except expressly by the legislature. And they have pointed
21 to no waiver of sovereign immunity anywhere in any statute
22 or provision of the State Constitution.

23 And before I leave the federal constitutional claim,
24 the idea that requiring over 80,000 voters that have
25 already taken time to cast their ballot, either requiring

1 them to vote again or even requiring that the entire
2 election date be changed so that all of those voters have
3 to vote a second time --

4 THE COURT: Let's make sure we're on the same page,
5 Ms. Correia, because I don't believe that is what was
6 argued. At this point what the plaintiffs are asking this
7 Court to do is require that going forward any votes that
8 are cast are cast using paper ballots. Not to discount or
9 disqualify any previous ballots that have been cast using
10 the DRE system and disenfranchising those voters but rather
11 to use a prophylactic measure going forward of paper
12 ballots in an effort to mitigate any harm that might
13 otherwise have ensued.

14 MS. CORREIA: But the plaintiffs have a right to a
15 paper ballot now. They have a right to a paper absentee
16 ballot. Every voter does. They have a right to vote
17 absentee by paper form or DRE.

18 THE COURT: But the fact of the matter, Ms. Correia,
19 is if you show up at a polling location for early voting,
20 you are not voting from another state or another country.
21 You are showing up to vote in person. And very few voters
22 who show up at the polls to cast a ballot request a paper
23 ballot. The majority of the ballots that are cast are cast
24 using the system, which is the subject of the lawsuit that
25 has been filed.

1 So even though there is the option of requesting a
2 paper ballot, that doesn't address what the Court is
3 considering because that option is just that. Unless I say
4 as a voter I want a paper ballot, or there is some issue
5 with my identification such that I am given a provisional
6 ballot, I am going to be checked in, given a card, and
7 directed to one of the machines. And that is where, I
8 would guess, more than 95 percent of the voters cast their
9 ballots.

10 So the idea that paper ballots are available does not
11 address the fact that most of the citizens who are voting
12 are not voting using paper ballots. They are using the
13 machines.

14 MS. CORREIA: Correct, your Honor, because it is their
15 choice, because of their right to choose the method they
16 choose.

17 THE COURT: Voters aren't choosing the method in that
18 way. That argument doesn't have legs with the Court
19 because I think there are very few people who walk in the
20 polls and say, "Well, do I have a choice?" Some people may
21 not even know they have a choice.

22 And so I don't think that is an argument you need to
23 spend a lot of time on because it is not an argument that
24 is presented to voters as they walk in the door. There is
25 no signage that is posted that says, "You have the option

1 of a paper ballot or using the DRE system". There is no
2 one standing at the door who says, "Hey, now that you
3 checked in" -- or even at check-in when you are providing
4 your identification so that you can be compared to the
5 pollbooks -- who says to you, "You have the option of
6 casting a paper ballot. What would you like to do?"

7 What happens is that you show up, present your ID. If
8 your ID does not align with information in the pollbooks,
9 you are given a provisional ballot. If it does, you are
10 given a card and you are directed to go to one of the 9,
11 10, 15 machines that are lined up around the room.

12 You are shaking your head and agreeing with me now,
13 Ms. Burwell, so it is okay.

14 So that is how it works. So as a practical matter
15 even though citizens can request, voters can request a
16 paper ballot, I don't think most people know that and that
17 is not what happens in precincts around the state of
18 Georgia. It is just not what happens.

19 So let's move to an argument that might help me decide
20 this issue.

21 MS. CORREIA: Well, your Honor, this case was brought
22 under the state Constitution and state law, and the
23 Secretary of State is the chief election official in the
24 state. He has coordination responsibilities under HAVA.
25 He is the official responsible for tabulating votes in this

1 instance.

2 THE COURT: Agreed.

3 MS. CORREIA: The governor is actually the state
4 official that will certify the election because it is a
5 congressional election. And the Secretary of State, not
6 the counties, determines what voting equipment is used in
7 this case.

8 So the Secretary of State, regardless of how the
9 plaintiffs would like to frame the relief they are seeking
10 as being just from the three counties, it is, in fact,
11 relief being sought from the State.

12 THE COURT: Agreed.

13 MS. CORREIA: And the State is absolutely immune.
14 Under *Sustainable Coast v. Coastal Marshlands*, the State is
15 immune not only from damages claims but the State is immune
16 from injunctive relief claims. And the plaintiffs have not
17 pointed to a single provision in state law that would waive
18 that immunity.

19 So this Court does not actually have jurisdiction to
20 entertain the plaintiffs' claim because of the sovereign
21 immunity issue.

22 But even if the Court did have -- even if there were
23 no sovereign immunity claim here, the plaintiffs have not
24 identified a single cause of action under state law. None
25 of the statutes they cite throughout the brief provide a

1 state cause of action. And so they have no vehicle to
2 proceed in pursuing this action.

3 To the extent that they bring it in under the Georgia
4 Constitution, there is also, as our brief states, there is
5 no private right of action to sue directly under the state
6 Constitution. There is no equivalent, state court
7 equivalent or state law equivalent of 42 USC 1983, which
8 provides the vehicle for individuals to sue under the
9 federal Constitution. And, therefore, even under the state
10 Constitution, there is no private right of action here even
11 if it were not absolutely barred by sovereign immunity.

12 And this case is -- the relief that the plaintiffs
13 seek is really precluded by a Georgia Supreme Court case
14 from 2009 called *Favorito v. Handel*. One of the
15 plaintiff's origination's members was one of the
16 plaintiffs. There were other plaintiffs as well in this
17 lawsuit that brought a similar challenge to the use of
18 DREs, and the Georgia Supreme Court said you have no -- and
19 this was both a federal and state constitutional challenge
20 under *Favorito*.

21 So even if they have a -- even if they believe they
22 asserted federal claim, even though their complaint has
23 absolutely no mention of any federal cause of action in it,
24 this case is precluded by *Favorito v. Handel*. The Court
25 there held that there was no constitutional right to have

1 the state use any particular kind of voting system, and in
2 particular the DREs.

3 And the Court held that it is the job of the
4 democratically-elected representative to weigh the pros and
5 cons of the various balloting systems. So long as their
6 choice is reasonable and neutral, it's free of judicial
7 second-guessing.

8 THE COURT: That is correct.

9 MS. CORREIA: We also believe that the plaintiffs
10 misread the State statute to the extent that they are
11 relying on 21-2-379(a, (b), (c), and (f) to provide that
12 because the reexamination that they have requested has not
13 been conducted yet -- by their own admission, it will take
14 months and they asked for it in early May -- just because
15 that reexamination has not yet occurred does not mean the
16 system itself is not currently certified and viable. And
17 no certification of the system is required under state law
18 when -- just because there has been a reexamination
19 requested.

20 The other thing I would point to, just in concluding,
21 is that the State Code in 21-2-334, in mentioning what
22 types of problems with voting machines can lead to paper
23 ballots being used, refers specifically to voting machines.
24 And voting machines is defined elsewhere in the Code, in
25 21-2-2(40), a voting machine is also known as a lever

1 machine. The state has not used lever machines since at
2 least 2002 when it adopted the DREs. So that statute does
3 not apply.

4 21-2-281 refers only to voting equipment but it limits
5 the instances where malfunction of voting equipment can
6 lead to the use of paper ballots to the reasons set forth
7 in 21-2-334. So, again, all the reasons in 21-2-334 set
8 out issues specific to voting machines and their use.

9 So the plaintiffs in this case are required to show
10 that there is some sort of irreparable harm to their
11 rights. If they have no private right of action in this
12 case, if they have no claim, they cannot show irreparable
13 harm.

14 The threat to the non-moving party here, the counties
15 and the voter that have already voted, is very high. And
16 plaintiffs -- none of the testimony provided by the
17 plaintiffs' witnesses was anything more than speculative.
18 This might happen, that might happen, this is possible.
19 But all of them admitted that they have no information that
20 any machine was tampered with, that any software was
21 tampered with, that anything at all being used in the
22 June 20th run-off election will not work exactly as it is
23 supposed to.

24 THE COURT: The argument is that we don't know if it
25 does or doesn't because there is no way to verify it.

1 MS. CORREIA: And as the Supreme Court in *Favorito v.*
2 *Handel* stated, your Honor, no system is perfect. But we
3 leave that to the elected officials that are choosing the
4 system.

5 And in closing, there is absolutely -- there is no
6 likelihood of success on the merits in this case since it
7 is barred by sovereign immunity. And I'll leave it at
8 that. Thank you very much.

9 THE COURT: Ms. Burwell?

10 MS. BURWELL: Your Honor, I want to start with our
11 motion to dismiss.

12 The complaint was filed on the 25th, and Mr. Barron
13 was not served until he was served with something this
14 afternoon during the break. He has never been served with
15 a copy of the complaint and summons. Instead, the summons
16 and complaint was left at his office with a receptionist
17 who does not have authority to accept service on his
18 behalf.

19 So for that reason the Court does not have personal
20 jurisdiction over Mr. Barron or the claims against him that
21 are set forth in the complaint.

22 The plaintiff, waiting until today to serve, because
23 9-11-4(c) provides that service is supposed to be perfected
24 within five days, and they have not clearly used the
25 greatest possible diligence to serve him within a five-day

1 period, so for that reason -- and their inability to be
2 able to prove due diligence, the Court ought to dismiss the
3 claims against Mr. Barron. And the cases supporting that
4 are in our brief.

5 The second issue that we raised in the motion to
6 dismiss was the sovereign immunity issue. Sovereign
7 immunity applies to him because he is sued in his official
8 capacity as the director of elections. And as has already
9 been argued, the State Code provides that declaratory and
10 injunctive relief are subject to the sovereign immunity
11 defense.

12 The next issue I wanted to address is that for the
13 first time today, which is not in their motion for
14 temporary restraining order, they have asked the Court to
15 declare that the use of the DRE is impracticable. And the
16 Court is not allowed to do that because under 9-4-5, it is
17 clear that a trial on a request for declaratory judgment
18 cannot be heard earlier than 20 days after the service,
19 unless the parties consent in writing to an earlier trial.

20 And they never addressed in the TRO request anything
21 about a declaration, and so because their request for a TRO
22 is, as he has now argued, dependent on a declaration from
23 the Court that is not before the Court, the Court ought to
24 deny the TRO on that ground.

25 Lastly, I don't want to reiterate what the other

1 defendants' counsel argued, and we join in all the
2 arguments they are making, but the injuries to the
3 plaintiffs doesn't outweigh the injury to the County
4 defendant.

5 You heard from Mr. Barron about the financial costs
6 and other issues that would arise, including voter
7 confusion, the administrative upheaval if the Court were to
8 at this point in time in the midst of an election make a
9 change. So we think that that would be averse to the
10 public interest because, in essence, what they are asking
11 the Court to do is suspend the vote, to come up with a new
12 process, and then that process to go forward. And that
13 would not be in the public interest because it would
14 undermine the public's confidence in the voting process.

15 And, lastly, if the Court were going to consider
16 providing them any relief, we ask that the Court require
17 them to post some sort of a bond which would cover the
18 damage that would occur to Fulton County and the other
19 County defendants if a TRO were issued.

20 THE COURT: Thank you, Ms. Burwell. Mr. Bryan?

21 MR. BRYAN: Thank you, your Honor.

22 I believe that the plaintiffs in this case are well
23 intentioned. I believe that they actually do care about
24 the votes and how they're tabulated. And I just believe
25 that they don't quite understand everything that is

1 involved in it.

2 Some of the testimony shows that it appears to be a
3 bull in a China shop saying that a sixth grader can do
4 this, it would take them an hour and a half to figure out
5 how to do this, it won't cost anything at all. And clearly
6 from all the defense witnesses, that is not the case at
7 all.

8 The plaintiffs have chosen their avenue of relief and
9 it is just not allowed by law.

10 First of all, they don't have standing. In order to
11 have standing, they have to suffer a personalized injury
12 and not a generalized injury that is complaining about the
13 general course of government officials. And that is
14 exactly what they are complaining about here, is the
15 decision from the Secretary of State's office that doesn't
16 just apply to them, it applies to everyone that voted in
17 the state of Georgia and everyone that could vote in the
18 state of Georgia since 2002, essentially, when the DRE
19 system was introduced.

20 So not only do they not have irreparable harm, they
21 don't have any harm at all, at least not a constitutionally
22 recognizable harm. For that reason, they don't have
23 standing and this Court doesn't have jurisdiction to hear
24 this case.

25 Furthermore, specifically in relation to Defendant

1 Maxine Daniels, the plaintiffs have the burden to prove
2 they have standing, and here the only voter that they
3 claim -- there was one voter -- who may be or that they
4 claim was eligible to vote in this election but there is no
5 verification of that. There is no evidence that that is
6 actually true. And, therefore, the Rocky Mountain
7 Foundation lacks standing along with the individual
8 plaintiffs that are not eligible to vote in DeKalb County
9 in the Sixth District.

10 In regards to the elements of an interlocutory
11 injunction, I would point first to number four, which is
12 the public -- whether this would do a disservice to the
13 public. The most important issue that both sides have been
14 talking about and your Honor has asked about is the effect
15 on the public and their confidence in our voting system.

16 The number one way you are going -- that you could
17 possibly jeopardize that and remove people's confidence in
18 our voting system is today to declare that the system that
19 was been in use since 2002 is so bad that we can't trust
20 it, including in the April 18th election and including in
21 the voters who have already voted so far. That is the way
22 to assure that the public will lose confidence in their
23 election system.

24 I won't belabor any of the facts about the likelihood
25 of success on the merits, but I do not believe they have

1 shown any -- shown that, the balance of equity. Again, it
2 heavily favors the defendants in this case. The plaintiffs
3 do not seem to understand exactly what goes into holding an
4 election and especially holding one with paper ballots.

5 Thank you, your Honor.

6 THE COURT: Thank you. Mr. White?

7 MR. WHITE: Thank you, your Honor. Let me say thank
8 you for pushing through so that we can hear all this today.
9 And I concur with my co-defense counsel that I think the
10 plaintiffs' intentions are good but their execution is very
11 poor.

12 They missed the window. They have known at least
13 since April 18th about the problems with the tabulation in
14 Fulton County and still waited over a month. We do argue
15 that is laches.

16 But in particular to Cobb County, I wanted to point
17 out to the Court that this is a verified complaint and we
18 have Ms. Marks who verified this complaint on behalf of
19 Rocky Mountain Foundation saying she had voters who reside
20 in Cobb, Fulton, and DeKalb County. And then on the stand
21 when she was asked did you verify whether these voters that
22 you pointed to were Cobb, Fulton, and DeKalb County voters,
23 she said she did not. Straight out of her mouth, "No, I
24 did not verify".

25 So she's verified it in the complaint, but then she

1 gets to court today and says, "I haven't verified these
2 voters are voting in the Sixth District, living in the
3 district. Just that then intend to vote".

4 So the very first, you know, thing these plaintiffs
5 have to do to get in the door against Cobb County -- and
6 I'm just speaking to Cobb County -- is they have to show
7 their right to vote in this election will be harmed by
8 something that Janine Eveler and the Cobb Board of
9 Elections is doing.

10 There is not a named plaintiff from Cobb County, and
11 we don't have a verified plaintiff that is a member of
12 Rocky Mountain Foundation. So there is no standing at all
13 that -- or no plaintiff or even a connection to a member of
14 Rocky Mountain Foundation that could be effected by any of
15 the voting equipment used in Cobb County.

16 I also understand that he made this argument that
17 everybody in the Sixth District is effected if Cobb County
18 uses bad equipment. I have no more right -- a voter has no
19 more right in Cobb County to challenge -- if we're voting
20 for governor, I can't turn around and say Lowndes County is
21 using defective equipment. That is not where I vote. I
22 need to seek my relief against my elected officials, and
23 they don't have a party in this case who can seek relief
24 against Cobb County. They haven't done it. They have not
25 proved associational standing.

1 And I did want to cite the Court specifically to the
2 case of *Aldridge v. Georgia Hospitality* where it says you
3 have to show an association has standing to bring suit on
4 behalf of its members; you have to show members would
5 otherwise have standing to sue in their own right; the
6 interest that the organization seeks to protect are germane
7 to that organization's purpose; and neither the claim
8 asserted nor the relief requested requires the
9 participation of individual members in a lawsuit.

10 We don't have the first element because they have not
11 named a single person who has been verified to live in the
12 Sixth District and intends to vote in this run-off. We
13 have seen their organization doesn't reference anything
14 about this type of litigation. They cited you to a draft
15 copy of an IRS document filed three years ago. So they
16 don't meet the second part of that test.

17 And I don't understand how the relief requested is
18 going to address the needs of Cobb County voters in that
19 they don't have a Cobb County member in there voting.

20 Turning to the merits of the motion for temporary
21 restraining order, I would echo the repeated refrains here
22 that plaintiffs must show the injury alleged is actual and
23 imminent, not remote and speculative. That is repeated
24 over and over in Georgia law.

25 And the other point I wanted to make that I don't

1 think has been raised is it says where the injuries are
2 imminent and -- it says the injury has to be imminent and
3 irreparable and there is no adequate remedy at law.

4 There are other means for candidates or other electors
5 who think their equipment is bad to come in. They can file
6 an election contest if they think something has gone wrong.
7 So there is an adequate remedy at law. If they think this
8 election is bad, let the candidates or let the affected
9 voters come in afterwards and say, "This was unsafe", and
10 then they will have a chance to ask for the evidence
11 showing that the equipment was actually infiltrated or
12 insecure.

13 THE COURT: To the extent you believe that is a valid
14 way to contest the election results in the absence of some
15 proof of fraud, how would they be able to avail themselves
16 of that? That, I believe, gets to the heart of what
17 Mr. McGuire is arguing. They are either too early or too
18 late.

19 And based on the system that we use, because there is
20 no way to verify any fraud, how would this issue ever be
21 raised so that it can, in fact, be properly addressed?

22 MR. WHITE: Honestly, your Honor, I think the answer
23 is they need to be raising it with the Secretary of State
24 or the state legislature. What they are asking you to
25 do -- I'll go back to a point made at the very outset of

1 this case.

2 One of the first things out of plaintiffs' counsel's
3 mouth was, "We're only asking for this for this election".
4 If you enter this order today, there is now a Superior
5 Court order in the state of Georgia saying that this DRE
6 system is unsafe and inaccurate, and that will be used in
7 every election in this state from now until the legislature
8 meets again and decides how do we fix these laws and until
9 the equipment can be purchased by every county in the
10 state.

11 So this notion that this is only about this election
12 is completely false. An order from this Court saying that
13 this DRE voting system isn't correct or unsafe and
14 inaccurate affects every election from here going forward.

15 THE COURT: That doesn't quite address my question. I
16 understand the reach of any order by the Court. But as it
17 relates to the issues that are being considered today, and
18 to the extent that it is your argument -- and I don't think
19 the argument is misplaced -- that there is no concrete
20 injury to which the plaintiff can point, Mr. McGuire's
21 position is that, again, either they bring suit too soon or
22 they bring suit too late.

23 And in light of how we understand the DRE system
24 works, what real opportunity is there for citizens who have
25 a legitimate concern about the voting franchise to raise

1 that concern and bring those issues to the Court so they
2 can be addressed? Because you won't be able to demonstrate
3 from the DRE system that there is an inaccuracy.

4 MR. WHITE: And I understand the Court's dilemma. I
5 understand the plaintiffs' dilemma. But the legislature of
6 this state has set up both the judicial remedy that can be
7 applied in this circumstance and the method of voting.
8 And, honestly, it is our job to defend this action. I
9 don't have a solution for how the plaintiffs can bring this
10 up. I understand his frustration but that is, again --

11 THE COURT: Not your job?

12 MR. WHITE: It's not my job. I sympathize with the
13 Court's frustration that there is not a clear answer to
14 that and the plaintiffs' frustration that this got brought
15 too late. But there is really not -- at this point in this
16 run-off there is no reason to disenfranchise, and I know --
17 the other thing I wanted to point out, they are now asking
18 the Court to stop now and start letting the rest of this
19 class of voters to vote on paper ballots. There are going
20 to be some paper ballots that have already been mailed out
21 or come in later. So we'll have to talk about how to treat
22 those.

23 But what you are really talking about is are the
24 laws -- the order this Court enters ordering that to
25 happen, are the people who already voted, do they have an

1 equal protection issue? They weren't protected the same as
2 these folks. It is just a Pandora's box that I don't think
3 this Court would want to open up.

4 THE COURT: I don't want to open it, but the fact it
5 is Pandora's box doesn't mean we run away from it. I'm not
6 any more interested in opening that box than anyone else,
7 but the fact of the matter is, as I raised with
8 Mr. McGuire, I think that is a legitimate concern. I think
9 there are a number of issues that could ensue from the
10 utilization of two different types of voting methods in one
11 election. I think that is fraught with all kinds of
12 issues. But I don't know that that is a reason for it to
13 not be addressed.

14 MR. WHITE: And I think all the other issues here have
15 been covered adequately and we'll rest on our brief.

16 But I think the bottom line is even if we're going to
17 move past the threshold issue of they don't have -- Rocky
18 Mountain Foundation doesn't have associational standing to
19 get relief against Cobb County, I also just don't think the
20 evidence today meets the standard of a temporary
21 restraining order. They have not shown the speculative
22 harm that they think could happen outweighs all the
23 complications that will result from such an order that they
24 are requesting today.

25 THE COURT: Thank you. Mr. McGuire, your response?

1 And I think you should start with the qualified immunity
2 argument. Ms. Correia has been trying to make it for some
3 time. And now that she's had an opportunity to make it, I
4 would like to start there.

5 MR. MCGUIRE: Certainly, your Honor.

6 So the issue of whether there is sovereign immunity is
7 bound up in the question of whether we have a right of
8 action. Because if our right of action is under section
9 1983, then sovereign immunity is abrogated because that is
10 what section 1983 does. The federal abrogates the
11 sovereign immunity of local jurisdictions such as the
12 county courts and the county superintendents.

13 Sovereign immunity doesn't apply to mandamus relief,
14 even if it is just a state law case. So the question of
15 sovereign immunity is one that we think is addressed by the
16 fact that this case involves a burden to the fundamental
17 constitutional right to vote, which was mentioned in the
18 complaint, notwithstanding that they are saying it was the
19 first time they heard it today. It was mentioned in the
20 complaint in paragraph, I believe, 45.

21 And as the Supreme Court, the U.S. Supreme Court said
22 in *Johnson v. City of Shelby*, you don't even have to invoke
23 section 1983 to be able to claim relief under it because
24 Courts are empowered to give you all the relief you are
25 entitled to. And this Court is entitled to give us all the

1 relief that we're entitled to under the facts presented to
2 it. And where we alleged a violation or a burden on the
3 federal constitutional right to vote and the fundamental
4 constitutional right to vote, sovereign immunity doesn't
5 apply, which is why a lot of the cases they cited on
6 sovereign immunity are slip and fall cases. They are not
7 voting cases. I didn't see one. I may have missed it if
8 there is one there, but I didn't see one that was a voting
9 sovereign immunity case where the State successfully
10 defended on sovereign immunity grounds its ability to
11 withstand being brought into court to correct a voting
12 rights issue.

13 So we don't think that sovereign immunity applies,
14 even if this complaint is framed as a declaratory relief
15 request or injunctive relief request.

16 To a certain extent, if the Court is not satisfied
17 with that, you can also view the relief we're seeking today
18 as a mandamus request because what we're really seeking
19 here is we're really seeking an affirmative injunction, a
20 mandatory injunction, which really when brought against a
21 public official, it is more in the nature of mandamus,
22 really, than injunctive relief. And mandamus is not
23 subject to the defense of sovereign immunity even under
24 state law.

25 They also raised the question of whether the *Favorito*

1 *v. Handel* decision forecloses this lawsuit, and they point
2 to the holding there that there is no right to dictate that
3 you be able to vote in a particular manner. And that is
4 certainly what that Court decided.

5 But that Court was not looking at the issues that are
6 before this Court because the issues that are before this
7 Court involve an imminent threat of harm to the right to
8 vote. And in *Favorito v. Handel*, the argument was not that
9 the system in that case was -- I believe it was a
10 certification case. And we're not trying to get the system
11 decertified. We have asked the Secretary of State to
12 conduct a reexamination of his certification so that he can
13 essentially decertify it. That is the certification part.

14 The part that we're before the Court today with is
15 this idea that the use of the system under the current
16 circumstances is impracticable, and that statute
17 contemplates that the system you're using is one that is
18 approved for use.

19 So that statute bites when you are already talking
20 about an approved system but there is some reason that has
21 come up. And it says in the statute, the language of the
22 statute says that if for any other reason at any primary or
23 election the use of voting machines wholly or in part is
24 not practicable, then the superintendent may arrange to
25 have the voting for such candidates be done with paper

1 ballots.

2 And in rereading that particular phrase, I think it
3 also goes to the Court's earlier concern about what you do
4 with the people who already voted. I think the statute
5 gives a way to address that because it allows for the fact
6 that the use of the system may be impracticable wholly or
7 in part. And the part could be what is going forward. So
8 the statute allows for us to change the method of voting on
9 a going-forward basis.

10 And just on a practical point, the idea that the
11 DeKalb County votes that are casted by different methods is
12 difficult, it's not inconsistent with what is being done
13 now. As the Cobb County witness Ms. Eveler testified from
14 her exhibit showing the returns to date, there have already
15 been ballots that have been cast by multiple different
16 methods. Those ballots are going to be counted currently
17 using different methods. They are all going to be scanned,
18 transmitted to the GEMS' tabulation server to be totaled,
19 but they are being counted by different methods now.

20 So the idea that you take some that are DRE votes and
21 add in paper ballot hand-counted counts is not beyond the
22 realm of what they are doing now, what they are able to do
23 now.

24 The other issue that they seem to raise in common is
25 the idea that we put on no evidence that any of this harm

1 has occurred, there is no evidence that anybody has
2 actually gotten into these systems. And the irony of that
3 point is that the absence of evidence in this case in
4 particular is not evidence of absence. The irony of that
5 point is that the better the adversary you are facing, the
6 less chance you will have of knowing that you have been
7 hacked. Mr. Felten talked about that. Mr. DeMillo talked
8 about that, I believe.

9 When you are facing the kind of adversary that
10 apparently has an interest in U.S. elections these days,
11 you are not dealing with somebody who will leave a trace
12 that you will be able to find. And so the fact that there
13 is no evidence is not evidence that it hasn't happened. In
14 fact, it is speculative on their part to say it hasn't
15 happened.

16 What we do know is there is plenty of opportunity.
17 And we know that in the cybersecurity world, it is like
18 dropping your cookie on the ground. Do you throw it away
19 or do you eat it? I mean, prudence is that you assume
20 something is on it once you drop it on the ground.

21 THE COURT: Even though I don't disagree with that
22 argument, Mr. McGuire, because I think at the end of the
23 day it is a circular argument. You are not able to prove
24 there has been any manipulation of votes cast from a system
25 that has no verification method. But I think for me this

1 is one of the places where *Favorito* absolutely applies
2 because at the end of the day, it is left within the sound
3 discretion of the elected official, in this instance the
4 Secretary of State, to determine how voting will occur in
5 the state of Georgia.

6 And so to the extent that I may not agree that it is
7 prudent to continue use of the DRE system, in the absence
8 of some evidence to support your argument that there is a
9 likelihood of fraud and abuse, I think, essentially, what I
10 would be doing is second-guessing the authority of the
11 elected official to make a determination about how voting
12 will take place. And the law doesn't authorize me to do
13 that.

14 MR. McGUIRE: And I understand your Honor's
15 assessment. I think a distinction needs to be drawn
16 against the Secretary's role in approving a system in the
17 first place and this idea that if an approved system is
18 impracticable for any reason to use, you use paper ballots.

19 THE COURT: But have we determined that it is
20 impracticable?

21 MR. McGUIRE: That is what we're alleging, that it is
22 impracticable because of the risk that is a clear and
23 present risk, an imminent risk right now, especially given
24 the threat environment, given the recent developments that
25 have happened at KSU, pollbook issues, the election issues

1 in Fulton County.

2 So our position is that we're not second-guessing
3 anything that the Secretary of State -- it is not a
4 decision that he is going to make. Let's say, to use an
5 example we used earlier, if you spring a leak overnight in
6 a polling place on the second floor and it rained on all
7 the machines overnight and they were ruined, the Secretary
8 of State would not be involved in making the decision to
9 switch to paper ballots. What would happen is the
10 superintendent of elections would look at the statute and
11 say, "It is impracticable to use these machines. I'm going
12 to use paper ballots. That is what the statute tells me to
13 do".

14 And what we're asking the Court to do is to say, "This
15 is a situation where that applies at large", because all
16 these machines are impracticable to use because of what we
17 know and learned in the last couple months and last couple
18 weeks even about why they are vulnerable to attack and what
19 kind of adversaries out there are looking to --

20 THE COURT: But do those vulnerabilities authorize the
21 Court to do what you're asking me to do? I think this is a
22 serious issue. I don't at all disagree. I don't think
23 anyone who is a citizen of this country would have any real
24 issue with the arguments that you are raising because I
25 believe this is something that we all are invested in.

1 But that fact alone does not authorize me to
2 unilaterally act in a way that would not be supported by
3 law. So assuming that you get over the qualified immunity
4 hurdle -- and I'm not sure you do. I guess you will come
5 back to standing. Assuming you get over the standing
6 hurdle -- I'm also not sure you do -- and we're even
7 looking at the requirements for you to be able to prevail
8 on your claim for a TRO, I simply have not yet heard what
9 authority supports your request for this relief. And I
10 don't believe that the Court is authorized to do what
11 you're asking me to do.

12 MR. MC GUIRE: We would point to the Court's equitable,
13 inherit equitable authority to deal with issues where there
14 is not an adequate remedy at law because that is the
15 situation here. There is no adequate remedy at law that we
16 can turn to. As has already been noted, we can't complain
17 about this after the fact because everyone will have
18 already voted. And when they run the recount, it will show
19 the same results because there is no way to check whether
20 it is right.

21 So the injury is irreparable in the sense that --
22 first of all, it's a constitutional right. The injury is
23 always considered irreparable. But it is also irreparable
24 in the practical sense that it literally can't be undone
25 once people have voted.

1 THE COURT: But the fundamental issue is the injury is
2 speculative, so I don't know how we get past that hurdle.

3 I don't disagree with you as it relates to -- which is
4 why I raised the issue with Mr. White. Certainly, I
5 understand his position. He's not the plaintiff. You-all
6 are.

7 But I still need to determine that there is, in fact,
8 some specific harm, and we have not been able to make that
9 determination for all the reasons discussed in the
10 testimony. But that is what is before me. I don't have
11 anything else.

12 MR. MC GUIRE: And just to address the point of
13 speculativeness. I don't think the injury is -- I would
14 disagree, respectfully, that the injury is speculative in
15 the sense that an injury is speculative for purposes of
16 standing. It is certain that this injury will occur. It
17 is not certain, because we don't have all the facts about
18 whether someone is attacking the system, but that is sort
19 of a second order injury.

20 The first order injury, which is what we're looking at
21 now, is the impact on the voters who have their right to
22 vote burdened now. That is a current injury they are
23 actually suffering, and it is a burden on the right to
24 vote. And that is by itself an injury.

25 I mean, there may be additional injuries in the future

1 if it turns out that an adversary has changed the results
2 of the election or tweaked the results to deprive the
3 voters of their right to choose their congressperson. But
4 the injury they are suffering now is by no means
5 speculative. It is a current injury.

6 THE COURT: What is it?

7 MR. MCGUIRE: It's the fear that their vote will not
8 be counted, which to the same extent, the kinds of things
9 that depress voter turnout are injuries to the right to
10 vote. Even though you are making the voluntary choice not
11 to vote, if your turnout is depressed, you don't turn out
12 to vote because of something. Whatever it is that is
13 depressing turnout is an injury to the fundamental right to
14 vote. Even though you are still a free agent and still
15 making the decision whether to vote or not, because of that
16 depressing turnout, it injures the right to vote.

17 It's the same thing here. This is a situation where
18 these people are afraid their votes may not count. They
19 are afraid that the election may be stolen. And all that
20 is the kind of thing that depresses turnout, makes people
21 feel like they have less agency in casting ballots, like
22 they are less able to express their wills at the polls and
23 have it result in the outcome that they prefer.

24 THE COURT: What about the 80,000 people who already
25 cast ballots during early voting and absentee voting?

1 MR. McGUIRE: It is unfortunate they have already
2 voted. Our --

3 THE COURT: It is not unfortunate.

4 MR. McGUIRE: Well, our position is that it is better
5 to do less harm than to continue adding to the harm.

6 THE COURT: I understand that is your position, but it
7 goes back to what I asked you earlier. If your argument is
8 that there is a concern that certain electors will be
9 deprived of the opportunity to have their ballot cast, they
10 may vote but the vote may reflect something other than what
11 they actually voted, how do you, to Mr. White's point, how
12 do you ensure that there is some confidence in our
13 elections such that turnout is not so adversely affected
14 that we have diminishing rates of voters going to polls to
15 cast ballots? Because at the end of the day they will say,
16 "Well, you know, we don't know. Even if I go to the polls
17 to vote, I don't really know if the person I'm voting for
18 will be the way my ballot is counted".

19 So how do we deal with issues that could work to
20 undermine the public trust and integrity of our election
21 system?

22 MR. McGUIRE: I think the right lens to look at it
23 through is sort of the first order and the second order of
24 harms that I was talking about. The people who already
25 voted, obviously their turnout hasn't been depressed. They

1 voted. They have -- whatever degree of confidence they
2 have in the election, they have already chosen to
3 participate in it. They have taken the chance these
4 machines will record their intent correctly. So the only
5 harm they remain exposed to is the second order of harm,
6 which is someone actually hacking the system and will
7 someone actually change the result.

8 The people who haven't yet voted are exposed to both
9 harms. And our clients are exposed to the first order of
10 harm, which is the depressing effect on lacking public
11 confidence their votes will be cast and counted correctly
12 because of these machines.

13 THE COURT: Mr. McGuire, even that is speculative
14 because you don't know why people haven't voted.

15 MR. MC GUIRE: Well, we know why our plaintiffs haven't
16 voted, and they are the -- obviously, what the Court does
17 in this case will impact other voters so we can't speak to
18 about what we think the impact will be on them. But as far
19 as our plaintiffs are concerned, the harm they are
20 suffering, which is what is necessary for standing, is this
21 fear, this depressing effect of the uncertainty and the
22 lack of trust in the voting system.

23 THE COURT: So let's deal with the issue of standing
24 then.

25 MR. MC GUIRE: So there are two different types of

1 parties here, individual plaintiffs and then Rocky Mountain
2 Foundation.

3 And as far as the individual plaintiffs go,
4 Ms. Curling is a resident in Fulton County. She is
5 already -- she's verified the complaint and, therefore, the
6 allegations in the complaint which state that she has this
7 fear are in the record and we believe they satisfy her
8 injury, threat of imminent harm which is necessary for the
9 injunctive relief side of things. But she certainly has an
10 imminent injury, and it's to a constitutional right which
11 will be an irreparable harm.

12 As far as the Rocky Mountain Foundation members, they
13 are -- we produced an exhibit which lists three of them,
14 and Ms. Marks has testified that they told her that they
15 lived in the district.

16 And what she's verified in the complaint is that is
17 true and correct to the best of her knowledge and belief,
18 and it is true and correct to the best of her knowledge and
19 belief. There is no evidence that those people don't live
20 here. All we heard today are questions from opposing
21 counsel, which isn't evidence, saying, "Did you verify it,"
22 hinting that maybe they don't live there. In reality,
23 there has been no proof they don't live there. There is
24 only proof that they do live there.

25 And, you know, there is any number of reasons why they

1 might not have found the Cobb County elector Xuan Nguyen.
2 It turns out the name on our exhibit, I guess, lacked a
3 hyphen. And her street address was spelled Harbor with an
4 O instead of O-U. And that apparently makes a difference.
5 From what we understand, she is in the voter database under
6 the correct spelling of her address and registration
7 number. We have that.

8 As far as the other Rocky Mountain members that Rocky
9 Mountain has put forward as its members for purposes of
10 standing, again, no evidence at all. Michael Opitz may
11 have run for something five years ago and he may not have
12 challenged the use of the DREs then. But five years ago he
13 didn't know what we know today. And the injury today is a
14 different injury than whatever he was thinking five years
15 ago.

16 So we believe Rocky Mountain Foundation, the members,
17 the first prong of standing is they can sue in their own
18 right. We believe that is the only evidence in front of
19 the Court, that that is the case. And, typically, they
20 haven't challenged Ms. Curling's standing. And, typically,
21 if one plaintiff has standing, then standing issue is
22 dispensed with respect to the others.

23 Ms. Curling, they don't like the idea that a person in
24 one county can create standing against defendants in
25 multiple counties, but the fact is we have a district which

1 spans multiple counties so the same system is used in a
2 single election across multiple counties. So if
3 Ms. Curling believes her votes are -- her vote will be
4 rendered useless, not counted because of the problems with
5 the system in another county, she has standing against
6 those other counties as well as her own where she resides.

7 I'm not sure if that fully addresses the Court's
8 issue. If there is anything else outstanding I can
9 elaborate on, I'll circle back to it if I need to.

10 Mr. Barron's attorney raises the issue of personal
11 jurisdiction over him, the issue of service. I would point
12 out that personal service is a waivable, and Mr. Barron has
13 entered an appearance. It wasn't a special appearance to
14 contest jurisdiction. He entered a general appearance so,
15 therefore, he waived the issue of service.

16 The attorney for DeKalb County spoke to us quite a bit
17 about the issue of voter confidence. And, again, you know,
18 to just put it in the framework I just discussed, that is
19 the first order of harm that we talked about earlier, which
20 is the fear that your vote will be -- that your right to
21 vote is burdened by the fact that you mistrust the voting
22 system.

23 And their understanding of voter confidence is really
24 false voter confidence. It is whistling past the
25 graveyard. And they believe that we don't want it to cause

1 voters to question these problems so let's not address
2 these problems, and that is not the way to maximize voter
3 confidence. The way to maximize voter confidence,
4 especially in view of what everybody knows is going on
5 right now in the world, is to connect a selection on
6 trustworthy voting by a trustworthy voting method.

7 So going to the four temporary restraining order
8 prongs -- my iPad has just gone out so I'm going to have to
9 wing it on that -- the first one is irreparable harm. The
10 imminent threat of irreparable harm is one I just
11 addressed. I think the key thing that the other side is
12 talking about is the balance of the equities, the idea that
13 it is so difficult for the defendants to conduct these
14 elections using paper ballots.

15 THE COURT: They are trying to give you a phone or
16 something.

17 [Brief pause.]

18 MR. MC GUIRE: The balancing of the equities here is,
19 we believe, clearly in our favor, notwithstanding the
20 protestations from the superintendent that it is going to
21 be so costly and difficult to conduct this election using a
22 method that Georgia statutes provide for.

23 And they already have the ability to have people vote
24 by provisional ballot on paper and this is not something
25 that is novel. This is the way all elections were

1 conducted in this country for 200 years up until the advent
2 of these machines. So it is not a radical solution, and it
3 is far more reliable and for more trustworthy than the
4 solution that is being used now.

5 So I guess I have addressed the laches point and I
6 believe -- I don't believe any part of that requires an
7 additional response, and I have also addressed the voters.

8 So, your Honor, just to close, we believe that voter
9 confidence should be based not on a false sense of
10 security, which isn't shared by all the voters, but should
11 be based on actual security, which is real. And the use of
12 paper ballots, which is a solution that Georgia law
13 provides for this kind of problem, gives that kind of voter
14 confidence.

15 The idea that people will be voting on machines -- I
16 mean, we heard yesterday about the NSA story. Who knows
17 what we'll hear about tomorrow. Who knows what we're going
18 to hear about for the next two or three weeks while this
19 election is unfolding.

20 The worst situation would be for us to conduct this
21 election on DREs and find out at the end that it has been
22 compromised and it is unverifiable what actually happened
23 in the mind of the voters. That is the worst outcome.

24 THE COURT: How would you know it has been
25 compromised?

1 MR. McGUIRE: Well, we don't know. Who would know? I
2 think that is the --

3 THE COURT: And let's say your scenario plays out.
4 Would you have a way to contest the results?

5 MR. McGUIRE: We would have a way to contest the
6 legitimacy of the result that was reported, but we would
7 have no way to do a recount that produces the correct
8 result because, as Mr. Felten testified, the DREs are the
9 only record of the voters' choices. And the disconnect
10 between -- when you are filling in bubbles on a paper,
11 there is a record. When you are touching a screen and the
12 software is deciding what that means, there is no record
13 except what the software decides. There is no way to trace
14 it back.

15 So that would be a bad outcome because if we were to
16 have this election happen and we were to know it was
17 tampered with, there would be no way to fix it. And then
18 we would be in a situation of uncharted territory, I
19 guess, having another election and that would certainly be
20 traumatic.

21 So I think the best solution going forward for the
22 voters and the counties and for everyone would be to switch
23 as soon as possible to voting by paper ballot because it is
24 a proven system that Georgia law allows and it works. And
25 it would certainly solve all of these problems on a

1 going-forward basis.

2 And as the statute says, if the impracticability issue
3 arises, it can be triggered if it is impracticable in whole
4 or in part to use voting machines. So with part of the
5 election behind us, the impracticability ruling could apply
6 going forward.

7 Is there anything else I can address, your Honor?

8 THE COURT: I think that is it for now.

9 MR. McGUIRE: Thank you, your Honor.

10 THE COURT: Thank you. All right, based on the
11 pleadings I reviewed in preparation for today's hearing,
12 the Court believed that I made up my mind about this issue.
13 However, after having heard the arguments of counsel and
14 the testimony in this case, I need to give it some further
15 consideration so I'm not prepared to rule today.

16 I do understand this is a time sensitive matter and
17 will commit to counsel that my ruling will be provided by
18 the end of the week no later than Friday.

19 Is there anything else on behalf of the plaintiffs,
20 Mr. McGuire or Mr. Krugman?

21 MR. KRUGMAN: No, your Honor. And we really want to
22 thank you for having taken this much time.

23 THE COURT: Thank you. I hope you feel better.

24 MR. KRUGMAN: Thank you.

25 THE COURT: On behalf of the defendants, Secretary of

1 State first, Mr. Heidt and Ms. Correia?

2 MR. HEIDT: No, your Honor.

3 THE COURT: Ms. Burwell, on behalf of Fulton?

4 MS. BURWELL: I will only add that Mr. Barron's
5 appearance was via special appearance.

6 THE COURT: I was actually aware of that but thank you
7 for pointing that out. That might be good for Mr. McGuire
8 to know.

9 Mr. Bryan, on behalf of DeKalb County?

10 MR. BRYAN: Nothing, your Honor. Thank you.

11 THE COURT: Mr. White?

12 MR. WHITE: No, thank you, your Honor.

13 THE COURT: If there is nothing further, you may be
14 excused.

15 [The proceedings concluded.]

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C-E-R-T-I-F-I-C-A-T-E

STATE OF GEORGIA:

COUNTY OF FULTON:

I hereby certify that the foregoing transcript was taken down, as stated in the caption, and the colloquies, questions and answers were reduced to typewriting under my direction; that the foregoing pages represent a true and correct record of the evidence given.

I further certify that in accordance with OCGA 9-11-28(a) I am not a relative, employee, attorney, or counsel of any party, nor am I financially interested in the action.

This the 26th day of June 2017.

/s/ *Kristina Weaver*
KRISTINA WEAVER, RPR, CCR-B-1785